

Supplemental Water Quality Analysis— St. Johns Bayou and New Madrid Floodway

Steven L. Ashby, Carlos E. Ruiz, and Patrick Deliman

April 2000

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products.

The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.



Supplemental Water Quality Analysis— St. Johns Bayou and New Madrid **Floodway**

by Steven L. Ashby, Carlos E. Ruiz, Patrick N. Deliman **Environmental Laboratory** U.S. Army Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199

Final report

Approved for public release; distribution is unlimited

U.S. Army Engineer Research and Development Center Cataloging-in-Publication Data

Ashby, Steven L.

Supplemental water quality analysis: St. Johns Bayou and New Madrid Floodway / by Steven L. Ashby, Carlos E. Ruiz, Patrick N. Deliman; prepared for U.S. Army Engineer District, Memphis.

186 p.: ill.; 28 cm. —(ERDC/EL; SR-00-7)

Includes bibliographic references.

- Water quality Missouri New Madrid Region.
 Environmental quality Missouri New Madrid Region.
 Groundwater Quality Missouri New Madrid Region.
- 4. Big Oak Tree State Park (Mo.) 5. New Madrid Floodway (Mo.) I. Ruiz, Carlos E.
- II. Deliman, Patrick N. III. United States. Army. Corps of Engineers. IV. Engineer Research and Development Center (U.S.) V. Environmental Laboratory (U.S.) VI. Title. VII. Series: ERDC/EL SR; 00-7.

TA7 E8 no.ERDC/EL SR-00-7

Contents

Figures 1 - 39

| Preface | vii |
|---|------|
| Summary | viii |
| Conversion Factors, Non-SI to SI Units of Measurement | X |
| 1—Introduction | 1 |
| 2—Methods | 2 |
| Water Quality Assessments | |
| Evaluation of Project Impacts on Water Quality | 4 |
| Overview of Water Quality Processes in Wetlands | |
| Estimation of Upland and Agricultural Export Coefficients | |
| Nitrogen and Phosphorus | |
| Carbon | |
| Sediment | 10 |
| Sensitivity Analysis | |
| Evaluation of Project Impacts on Water Quality of the Mississippi River | |
| Evaluation of Potential Changes in Pesticide Usage on Water Quality | |
| Evaluation of Potential Impacts to Big Oak Tree State Park | |
| 3—Results | 14 |
| Spreadsheet Analysis | 17 |
| Evaluation of Project Impacts on Water Quality of the Mississippi River | 17 |
| Evaluation of Potential Change in Pesticide Usage on Water Quality | |
| Evaluation of Potential Impacts to Big Oak Tree State Park | 19 |
| 4—Discussion | 21 |
| 5—Conclusions | 24 |
| References | 25 |
| Tables 1 17 | |

| Appendix | A: Water Quality Data Sources – Annotated Bibliography A1 |
|-----------|---|
| Appendix | B: Water Quality Data and Data Summaries |
| Appendix | C: Spreadsheet Analyses |
| Appendix | D. Literature Review of Herbicide Application |
| SF 298 | |
| l ist of | Tables |
| | |
| Table 1. | Land Cover Area in the New Madrid Floodway |
| Table 2. | Land Cover Area in St Johns Bayou |
| Table 3. | Hydrologic Scenarios for the New Madrid Floodway and St Johns Bayou |
| Table 4. | Wetland Function Factors for Land Covers and Selected Water Quality Constituents |
| Table 5. | Summary and Ranking of Export Values for Nitrogen and Phosphorus for Selected Land Cover Types |
| Table 6. | Watershed Mass Balances (Peterjohn and Correll 1984) |
| Table 7. | Watershed Mass Balances for the Riparian Zone of an Agricultural Watershed (Lowrance et al. 1984) |
| Table 8. | Monthly Discharge (1000 cfs) for the Mississippi River at Hickman, KY |
| Table 9. | Summary Statistics for Selected Water Quality Constituents |
| Table 10. | Surface Water Quality Data Summary |
| Table 11. | Recommended Initial Water Quality Concentrations |
| Table 12. | Watershed Function Expressed as % Net Removal – New Madrid Floodway |
| Table 13. | Watershed Function Expressed as % Net Removal – St Johns Bayou |

- Table 14. Potential Impacts on Nutrient and Sediment Loading Interactions Between the Mississippi River and the Study Area with the Project
- Table 15. Human Health Criteria for Pesticides in Drinking Water
- Table 16. Pesticides in Surface Waters (NAWQA Sites)
- Table 17. Mass Balance for Selected Water Quality Constituents at Big Oak Tree State Park

List of Figures

- Figure 1. Stations for Water Quality Data Retrieved from STORET
- Figure 2. Dissolved Oxygen Concentrations
- Figure 3. BOD₅ Measurements
- Figure 4. Nitrate/Nitrite Concentrations
- Figure 5. Organic Nitrogen Concentrations
- Figure 6. Total Phosphorus Concentrations
- Figure 7. Dissolved Phosphorus Concentrations
- Figure 8. Total Organic Carbon Concentrations
- Figure 9. Dissolved Organic Carbon Concentrations
- Figure 10. Suspended Solids Concentrations
- Figure 11. Residue Concentrations
- Figure 12. Instantaneous discharge measurements for Rives and Morehouse.
- Figure 13. Total Iron Concentrations
- Figure 14. Dissolved Iron Concentrations
- Figure 15. Distribution of Iron Concentrations in Well Water
- Figure 16. Distribution of Total Phosphorus Concentrations by Water Source
- Figure 17. Distribution of Nitrate and Nitrite Concentrations by Water Source
- Figure 18. Distribution of Organic Nitrogen Concentrations by Water Source

- Figure 19. Distribution of Ammonia Concentrations by Water Source
- Figure 20. Distribution of Total Kjeldahl Nitrogen Concentrations by Water Source
- Figure 21. Distribution of Conductivity Values by Water Source
- Figure 22. Distribution of Total Alkalinity Values by Water Source
- Figure 23. Nitrogen Removal for the New Madrid Floodway
- Figure 24. Phosphorus Removal for the New Madrid Floodway
- Figure 25. Organic Carbon Removal for the New Madrid Floodway
- Figure 26. Sediment Removal for the New Madrid Floodway
- Figure 27. Nitrogen Removal for St Johns Bayou
- Figure 28. Phosphorus Removal for St Johns Bayou
- Figure 29. Organic Carbon Removal for St Johns Bayou
- Figure 30. Sediment Removal for St Johns Bayou
- Figure 31. Distribution of Tebuthiuron
- Figure 32. Distribution of Prometon
- Figure 33. Distribution of Diethyl Atrazine
- Figure 34. Distribution of Permethrin
- Figure 35. Distribution of DCPA
- Figure 36. Distribution of Atrazine
- Figure 37. Distribution of Propoxur
- Figure 38. Distribution of Silvex
- Figure 39. Distribution of Simazine

Preface

The work reported herein was conducted for the U.S. Army Engineer District, Memphis, by the U.S. Army Engineer Research and Development Center (ERDC) under the purview of the Environmental Laboratory (EL). Funding was provided under a Military Interdepartmental Purchase Request, number W38XGR92578260.

This report was prepared by Mr. Steven L. Ashby, Dr. Carlos E. Ruiz, and Dr. Patrick N. Deliman, Environmental Processes and Effects Division (EPED), EL. Preparation of this report was under the general supervision of Dr. Richard E. Price, Chief, EPED, and Dr. John W. Keeley, Director, EL.

Dr. Lewis E. Link was Director of ERDC and COL Robin R. Cababa, EN, was Commander of ERDC during the conduct of this study.

This report should be cited as follows:

Ashby, Steven L., Ruiz, Carlos E., and Deliman, Patrick. (2000). "Supplemental water quality analysis—St. Johns Bayou and New Madrid Floodway," ERDC/EL SR-00-7, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Summary

A supplemental assessment of water quality data was conducted to describe potential impacts on water quality in the St. Johns Bayou and New Madrid Floodway as a result of the proposed flood control project. Existing water quality data from Federal and state resource agencies and literature-based information on land use effects on water quality were compiled for evaluation. Results of this evaluation were used to describe water quality conditions and, in conjunction with land cover and hydrology information, the relative transport/retention of selected materials associated with various hydrologic events based on selected surface water elevations. Specific issues addressed included evaluation of (a) the effects of hydrologic changes on water quality for both the area impacted by the proposed project and in relationship to the overall water quality of the Mississippi River, (b) the effects on water quality associated with potential changes in pesticide use, and (c) the effects of proposed groundwater supplement on Big Oak Tree State Park.

This approach was presented to representatives from the U.S. Army Corps of Engineers, Memphis District, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the Missouri Department of Natural Resources. Spreadsheet calculations were used to conduct mass balances to assess relative impacts with and without the project. Rationale for suggested input into the spreadsheets was presented to representatives from Federal and state agencies prior to application.

Additional water quality data collection included recently collected data in the immediate vicinity of the study area and allowed a broad assessment of water quality conditions. Water quality in the area reflects conditions typical for basins where agriculture is the dominant land use. In general, nutrient concentrations (with the exception of phosphorus) were not excessively high except during periods of elevated flow, and basin concentrations were not substantially different than observations for the Mississippi River. Sediment concentrations were generally lower than concentrations in the Mississippi River and increased with runoff as expected. With the exception of a few occasional high concentrations of nitrates, groundwater quality was acceptable, although phosphorus concentrations in groundwater were generally higher than in surface waters. Point sources were the most notable sources of extremes (high nutrients or low dissolved oxygen concentrations).

Potential changes in pesticide usage and impacts on water quality were evaluated with an assessment of potential changes in cropping practices, a literature review of herbicide transport research, and an assessment of pesticide data compiled in the data retrievals. In general, pesticide concentrations were relatively low in surface and subsurface waters, and water supply concentrations were below water quality criteria for drinking water.

General conclusions are summarized below. Water quality with the project alternative should be similar to conditions that exist during periods of no flooding. Material processing should be similar between existing conditions and the alternative project as well. The basin most likely retains or removes material from headwaters and floodwaters; this process is maximized during low-water periods and is comparable with the alternative project. The addition of over 9,500 acres of restored wetlands should provide for additional water quality improvements.

The impact of pesticides, atrazine in particular, on public groundwater resources is expected to be minimal. Furthermore, the impacts to shallow water resources, i.e., private wells, are also expected to be minimal. A greater potential exists for atrazine contamination to surface waters. The optimal method for reducing this likelihood is the implementation of Best Management Practices (BMPs). It is a feasible assumption that through adoption of BMPs, in combination with monitoring efforts, that atrazine contamination to water resources can be maintained below drinking water standards.

Impacts to the water quality of the Mississippi River with the proposed or alternative project in place are not expected to be discernible, due to the overwhelming volume of water in the Mississippi River relative to floodwater volume in the project area. Mass balance estimates indicated that impacts to material loads of the Mississippi River are less than 0.1 percent for moderate flows with the project.

Potential impacts to Big Oak Tree State Park with the project are likely to be associated with a decreased supply of sediments and the associated sustainability of the site. Historical alterations in the flow regime associated with the development of agriculture in the area during the 20^{th} Century has been suggested as a major mechanism contributing to the decline at the park. The use of groundwater to restore a flooding regime more conducive to the sustainability of the park is suggested and the impacts of reduction in material supply (e.g. sediments) can be lessened with the use of surface water when available. A comparison to bottomland hardwood areas in the St. Johns Basin (which have been isolated from floods) should be considered to further identify the potential for impacts at Big Oak Tree State Park. Iron concentrations near the park were similar for surface-water and well-water sites, and the change in source water would not alter concentrations currently provided to the site. Analysis of iron data indicated that the potential for iron toxicity to native vegetation is low.

Conversion Factors, Non-SI to SI Units of Measurement

| Multiply | Ву | To Obtain |
|---------------------------|------------|----------------------------|
| acre-feet | 1,233.489 | cubic meters |
| acres | 4,046.873 | square meters |
| cubic feet | 0.02831685 | cubic meters |
| feet | 0.3048 | meters |
| feet per mile | 0.19 | meters per kilometer |
| pounds (mass) per acre | 0.000112 | kilograms per square meter |
| tons (2,000 pounds, mass) | 907.1847 | kilograms per square meter |

1 Introduction

The St. Johns Bayou and New Madrid Floodway project was authorized for construction by the Water Resources Development Act of 1986 (PL 99-662). The project will close the gap in the Mississippi River levee in New Madrid, Mississippi, and Scott Counties in Missouri. The primary purpose of the project is to provide flood control in the St. Johns Bayou Basin and the New Madrid Floodway. The project is designed to eliminate the physical and economic barriers created by frequent flooding in East Prairie, Missouri, and the surrounding area. The project includes channel enlargements and a 1,000-cfs¹ pumping station for the St. Johns Bayou Basin and closure of a 1,500-ft gap in the levee and a 1,500-cfs pumping station in the New Madrid Floodway. Three alternatives have been described in detail including without project conditions, the project as authorized, and an alternative that avoids and minimizes impacts, which is the recommended plan. Complete details of the project are provided in the Draft Supplemental Environmental Impact Statement (SEIS) (U.S. Army Corps of Engineers, Memphis District 1999).

Areas of controversy during the review process included potential impacts on the hydrology and water quality associated with closure of the 1,500-ft gap in the levee and are described in detail in the SEIS. Water quality concerns with the constructed project include potential impacts of changed hydrology on material transport into and out of the project area, change in pesticide/herbicide application associated with potential changes in agricultural land use, and impacts to Big Oak Tree State Park, which would no longer receive periodic floodwaters from the Mississippi River. Concerns about material transport were centered around the potential loss of wetland functions that improve water quality of floodwaters and the relationship of this potential loss to the overall water quality of the Mississippi River and the hypoxic zone in the Gulf of Mexico. Concerns associated with pesticide/herbicide applications included potential increased concentrations in surface and drinking water supplies associated with increased application. The change in hydrology may accelerate the decline of unique old growth bottomland hardwood forests at Big Oak Tree State Park due to inadequate hydroperiods (Larson, Journet, and Taylor 1992). The project includes opportunities to modify the hydrology at Big Oak Tree State Park with supplements from groundwater wells, but concerns over changes in water quality, particularly elevated iron concentrations, have been expressed.

Chapter 1 Introduction 1

 $^{^{1}}$ A table of factors for converting U.S. customary units of measurement to metric (SI) can be found on page x.

Water quality studies in 1978 and sediment analyses in 1979, conducted by the Corps of Engineers and summarized in the SEIS, did not fully address these concerns.

The objective of this study was to compile sufficient water quality data to evaluate the above concerns relative to the three project alternatives. Specific objectives included:

- Describe the general water quality in the project area with the most recent available data.
- Qualify the effects of hydrologic changes on water quality for both the area impacted by the proposed project and in relationship to the overall water quality of the Mississippi River.
- Determine the potential effects on water quality associated with potential changes in pesticide use.
- Determine the effects of proposed groundwater supplement on Big Oak Tree State Park.

2 Chapter 1 Introduction

2 Methods

Water quality data and the potential for project impacts on water quality were assessed by compilation of existing data, evaluation of applicable water quality constituents, and an assessment of potential impacts based on relative changes in mass associated with representative hydrologic conditions with and without the project. In order to describe potential relative changes in mass of selected water quality constituents, a literature review was conducted to describe general conditions of nutrient transport for wetlands and agricultural lands. Processing (i.e., retention or transport) of constituents was then estimated based on general expected flux of material.

This approach was initially presented to representatives from the U.S. Army Corps of Engineers, Memphis District, the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (FWS), and the Missouri Department of Natural Resources (MDNR). These representatives, and others as mentioned in the following, provided comments and input into the development of the methods used to describe water quality impacts in the study area.

Water Quality Assessments

Data collection included a retrieval of water quality data from EPA's Storage and Retrieval System (STORET), and data requests from the University of Missouri Agricultural Research Extension Service, the U.S. Geological Survey (USGS), MDNR, and the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). Data sources are listed in Appendix A. Data retrieved from sources other than STORET were compared to STORET data to ensure that data were not duplicated. Results of data retrievals were compiled into a database (Appendix B) for subsequent analyses.

Water quality data from the retrievals and data requests were grouped into surface water, well water (groundwater), or effluent discharge or point source data. Water quality data assessments focused on nitrogen, phosphorus, carbon, suspended sediments, iron, and selected herbicides and insecticides. Additional water quality constituents were retained in the database. Summary statistics such as minimum, maximum, mean, and variance were calculated for selected water quality constituents in the database. Monthly temporal variability was assessed using graphical displays of data for selected water quality constituents. Stations with unrealistically high data were excluded during data analyses.

Evaluation of Project Impacts on Water Quality

Land cover data is available from the Memphis District and is summarized in the SEIS. The data consists of acres of specific land cover types by elevation at 1-ft contours. Areas for specific elevations used in this evaluation are presented in Tables 1 and 2. Hydrology information is also available from the Memphis District and is summarized in the SEIS. Data include acreage of areas inundated at 1-ft elevation contours, flood frequency information, discharge information, and volumes of water at 1-ft elevation contours. Hydrologic and land cover data were used in conjunction with water quality data to conduct mass balances for various scenarios associated with the project. A spreadsheet was developed to calculate expected loads under various scenarios. Scenarios used volumes and acres of land cover type at selected elevations. Material processing estimates were then calculated using expected loads and wetland function factors to yield a value, referred to as a wetland function value. Wetland function factors may be defined as an approximation of the material that is retained by the land cover (i.e. removed from the floodwater) or is transported from the land cover to the floodwater. The net yield, or load, was compared to the total available load, and the percentage that was transported or retained, referred to as the watershed function, was used for a relative comparison between scenarios.

Five hydrologic scenarios based on elevations were considered (Table 3). Scenario 1 describes existing conditions without any flooding. Scenario 2 describes conditions associated with the authorized project. Scenario 3 describes conditions associated with the alternative (avoid and minimize). Scenario 4 describes conditions representing an infrequent, major flooding event associated with an elevation of 300 ft. Scenario 5 describes conditions representing a more frequent flooding event associated with an elevation of 290 ft for both basins. The approach was applied separately to the St. Johns Bayou area and the New Madrid Floodway. Hydrology information for November through May was used and two seasons were described for Scenarios 2 and 3 based on proposed changes in the inundation due to flooding. Increased inundation from watershed inputs, associated with proposed changes to winter waterfowl habitat, was used for season 1 (November - January). Decreased inundation as a result of evacuation of watershed input and prevention of backwater flooding from the Mississippi River associated with the proposed project was used for season 2 (February - May).

Calculations in season 2 (for both Scenarios 2 and 3) for both basins assume that backwater flooding retained for waterfowl (season 1) will be partially removed via pumping/gravity flow and Mississippi River water will be allowed to enter into the project level to some extent. The concentration used in the spreadsheet reflects an expected value based on a review of existing water quality data for both water sources (Mississippi River and Headwater). Wetland functions were calculated on acreage for an elevation of 280 ft during season 2.

Loading estimates were calculated in the spreadsheet for each scenario using estimated concentrations for two sources of floodwater (i.e., the headwaters and Mississippi River water) derived from the database and wetland function factors. A literature review was conducted to develop general ranges of wetland water

quality functions and export coefficients for runoff from upland and agricultural lands. Discussions with a water quality specialist with the USGS and agricultural experts at the University of Missouri Delta Research Center were also conducted to provide input into the development of function factors used in the spreadsheet.

Wetland function factors were developed for two general types of land covers, (a) those that are described as wetlands, and (b) upland and agricultural lands that are flooded. The first step in assigning a wetland function factor was to determine if the land cover would generally remove materials from the floodwater or export to the floodwater more material than it retained. A negative value was assigned for net removal and a positive value was assigned for net export. As an initial classification, land covers that can be considered as wetlands (cypress/tupelo, scrub/shrub marsh, marsh, bottomland hardwood, riparian, sandbars, open water, and rivers) were assigned a negative function factor for each constituent (except for carbon as described below). Upland and agricultural lands, when flooded, were considered to remove material via sedimentation but also to export material via perturbations to the land associated with farming practices and crop type for a positive net export. Rationale for wetland function factors and export coefficients used in this analysis are described in the following paragraphs and were distributed to representatives from the Memphis District, MDNR, FWS, USGS, and EPA.

Overview of Water Quality Processes in Wetlands

General information on the impacts of wetland hydrology and wetland type was used to assign wetland function factors, although it is recognized that responses in material cycling are often quite variable. For example, wetlands subjected to different flooding regimes provide a different response for some processes. Litter decomposition can be slightly higher in manipulated (pumping) areas than in natural and impounded wetlands (Conner and Day 1991). In natural and impounded areas, nitrogen was immobilized during spring and summer but mineralized in the manipulated area during the same period (Conner and Day 1991). Phosphorus was not immobilized in the natural and impounded area but was mineralized at a slower rate than in the managed area (Conner and Day 1991). The general conclusion was that burial, or net accumulation of organic matter, nitrogen, and phosphorus, was more prevalent in stagnant, more flooded areas, and mineralization and/or export was greater for the managed areas. Significant removal of nitrogen has been observed for alluvial floodplains (Brinson, Bradshaw, and Kane 1984) and forested wetlands (e.g., bottomland hardwoods in the Atchafalaya Basin flooded for 67 days, Lindau, DeLaune, and Pardue 1994). Removal of total phosphorus by various types of wetlands can also be significant. Kadlec (1997) observed a 94 to 99 percent reduction in total phosphorus concentrations in wastewaters that were subjected to wetland treatments. Often, removal may be attributed to sedimentation of particulate phosphorus, which can be the dominant phase (Lindau, DeLaune, and Pardue 1994). However, relationships of small upland wetlands to the watershed can be highly variable depending on watershed conditions and runoff events. In a watershed that is primarily pasture for sheep grazing, the receiving wetland retained 23 percent of the nitrogen and 38 percent of the phosphorus entering the

system (Raisin 1996). Sediment retention is also highly variable and averages about 30 percent of the total entering with a maximum retention of about 95 percent (numerous studies summarized in Adamus et al. 1991).

In riparian zones, denitrification is also an important removal process (Pinay and Decamps 1988). Nitrate loss in riparian zones can be as much as 50 to 100 percent in headwater streams with only 15 percent removal associated with sediments (Cooper 1990). As observed for other wetland types (Raisin 1996), retention function of riparian buffers varies with width and frequency of gaps (Weller, Jordan, and Correl 1998).

In open water systems and rivers with sandbars, nitrogen and phosphorus removal processes are also occurring but probably to a lesser extent than in vegetated wetland systems such as marshes, swamps, and bottomland hardwoods. More variable hydrologic regimes in the latter systems would tend to increase the transport of materials and result in higher removal rates.

Results of intensive studies conducted in the Cache River system in northeastern Arkansas provide relative information on wetland processes for a system in the immediate vicinity of the study area and may be used to provide better estimates of wetland function factors. For example, DeLaune et al. (1996) measured nitrate reductions between 59 and 82 percent, which are consistent with studies described above. Conversely, Dortch (1996) estimated removal efficiencies of 29.5 percent for inorganic suspended solids, 21.4 percent for total nitrogen, and only 3 percent for total phosphorus. These values are probably lower than would be expected in the study area since they were calculated for a flow-through system and represent annual conditions. However, backwater flooding of bottomland hardwood systems during winter and spring may be less effective at nutrient transformation and removal since biological activity is greatly reduced during these seasons (Harris and Gosselink 1990) and estimates from Dortch (1996) may not be that low. Kleiss (1996) estimated a 14 percent decrease in suspended sediment load, which is also lower than would be expected for the study area due to the anticipated hydrology of a gradual flooding and dewatering. However, review of the 1993 flood data for the Mississippi River upstream of the study area (Holmes 1993) indicated that there was little sedimentation in the backwater areas downstream of St. Louis, MO, and a decrease of only 10 to 20 percent may be reasonable.

Wetland function factors for wetland land covers were estimated from the above information, in consultation with wetland experts when possible, and were reviewed by representatives from the Memphis District, EPA, FWS, and MDNR (Table 4). In general, the wetland function factor is an estimation of the percentage of mass of the constituent (nitrogen, phosphorus, carbon, and sediment) that will be retained by (including removal) or transported to the system. This value is usually measured from a mass balance approach and accounts for material already in the land cover. Vegetated wetland types were considered to be similar in removal efficiencies and more efficient than nonvegetated or sparsely vegetated types (e.g., open water, rivers, and sandbars). Values assigned were based on estimates from references noted in Table 4. Values for wetland types where little information was available were assigned

relative to values used for cypress/tupelo systems. For many of the land covers, carbon was assumed to be converted to dissolved forms and easily transported, so a positive function factor is suggested. Observations in bottomland hardwood systems in Mississippi (Ashby et al. 1991) and other systems (Harris and Gosselink 1990) support this assumption.

Estimation of Upland and Agricultural Export Coefficients

Wetland function factors or export coefficients for periodically flooded upland and agricultural land covers have not been developed. Consequently, consideration of material from two sources, (a) material available for export from the land (traditionally measured as export coefficients), and (b) removal from or export to the floodwaters (such as processes observed for wetlands), is required. Export loads for nitrogen, phosphorus, sediment, and carbon were estimated using initial export coefficients (ECi) (Beaulac and Reckhow 1982; Peterjohn and Correll 1984; Lowrance et al. 1984), soil fertility measurements (University of Missouri 1996), and representative concentrations. The initial export load was adjusted to account for changes in the availability of material associated with flooding versus runoff. Based on discussions with agricultural experts in the study area, relatively low slopes in the area (1 to 2 ft/mile, Luckey and Fuller 1984), and gradual changes in stage height with flooding and receding, sediment export from the upland and agricultural land covers is expected to be relatively low. Phosphorus concentrations in the soils are relatively high (23 to >70 lb/acre) and similar by cropping options (University of Missouri 1996) but are considered to be less mobile than nitrogen due to a lower solubility. Nitrate does not attach to soil particles but remains soluble and is easily transported with water (Killpack and Buchholz 1993) both as surface flow and subsurface flow. Legume crops such as soybeans can add up to 30 to 50 lb/acre of nitrogen in the study area (Killback and Buchholz 1993) and would result in a higher export coefficient than for other crop types.

These factors were used to adjust the export coefficient (EC), and an individual load was then calculated for each constituent. The individual load for each constituent was then added to the load associated with the floodwaters for estimation of the total load available. Since estimates of loads account for processes that impact concentrations and mass, a wetland function factor of positive 1 is assigned to all upland and agricultural land covers (i.e., 100 percent of the estimated load is available for transport when the floodwaters recede). The net yield is then calculated by reducing the load associated with floodwaters by 10 percent to describe losses from sedimentation.

Nitrogen and phosphorus

Export coefficients from Beaulac and Reckhow (1982), presented in Table 5, were used to estimate initial export loads for nitrogen and phosphorus. The median value of the export coefficient was considered as the initial mass

available. Additional information reviewed is summarized in Tables 6 and 7. Land covers in the study area that were not represented by those in Beaulac and Reckhow (1982) were assigned a value from a similar land cover. Since the literature-based loads represent annual loads, the initial estimated loads are reduced by a percentage that estimates the available load during the period of flooding. It was recommended that the initial nitrogen load be reduced by 25 percent and the initial phosphorus load be reduced by 50 percent. The rationale for these reductions is based on an expected decrease in the annual export coefficient since consideration is given to the wet period only and a higher particulate phase for phosphorus than for nitrogen. Adjusted export coefficients represent the amount exported for the period of inundation.

Calculation of export coefficients for nitrogen and phosphorus for various land covers is provided below:

Herbaceous Vegetation

| Nitrogen – | Range 2-7 kg/ha/year ECi = 2.5 kg/ha/year |
|---|--|
| Suggested value for EC = $2.5 \text{ kg/ha/year} \times 0.75$ | = 1.875 kg/ha |
| Phosphorus – | Range 0 – 0.8 kg/ha/year ECi = 0.2 kg/ha/year |
| Suggested value for EC = $0.2 \text{ kg/ha/year} \times 0.50$ | = 0.1 kg/ha |

Pasture

| Nitrogen – | Range 2 - >3000 kg/ha/year ECi = 5 kg/ha/year |
|--|--|
| Suggested value for EC = 5 kg/ha/year \times 0.75 | = 3.75 kg/ha |
| Phosphorus – | Range 0 – 5 kg/ha/year |
| Suggested value for EC = $0.8 \text{ kg/ha/year} \times 0.5$ | ECi = 0.8 kg/ha/year 0.5= 0.04 kg/ha |

Cotton

| Nitrogen - Based on estimates for row crops | Range 2 – 80 kg/ha/year ECi = 9 kg/ha/year |
|--|---|
| Suggested value for EC = $9 \text{ kg/ha/year} \times 0.75$ | = 6.75 kg/ha |
| Phosphorus – Based on estimates for row crops | Range 0.2 – 18.6 kg/ha/hr ECi = 2.2 kg/ha/year |
| Suggested value for EC = $2.2 \text{ kg/ha/year} \times 0.5$ | = 1.1 kg/ha |

Cotton/soybean

| Cotton/soybean | |
|---|-------------------------------|
| Nitrogen – Export expected to be high since | Range $2.5 - 41.5$ kg/ha/year |
| soybeans are nitrogen fixers. Based on | ECi = 13: kg/ha/year |
| estimates for mixed agricultural | |
| - | |

Suggested value for EC = $13 \text{ kg/ha/year} \times 0.75 = 9.75 \text{ kg/ha}$

| Phosphorus – Based on estimates for mixed agricultural | Range 0.2 – 3.2 kg/ha/year ECi = 1 kg/ha/year |
|--|--|
| Suggested value for EC = 1 kg/ha/year \times 0.5 | = 0.5 kg/ha |
| Soybean Nitrogen – Export expected to be high since these are nitrogen fixers. Based on estimates for mixed agricultural and nitrogen fixation | Range 2.5 – 41.5 kg/ha/year ECi = 20 kg/ha/year |
| Suggested value for EC = $20 \text{ kg/ha/year} \times 0.75$ | = 15 kg/ha |
| Phosphorus – Based on estimates for row crops | Range 0.2 – 18.6 kg/ha/hr ECi = 2.2 kg/ha/year |
| Suggested value for EC = $2.2 \text{ kg/ha/year} \times 0.5$ | = 1.1 kg/ha |
| Soybeans/corn Nitrogen – Export expected to be high since soybeans are nitrogen fixers. Based on estimates for mixed agricultural | Range 2.5 – 41.5 kg/ha/year ECi = 13 kg/ha/year |
| Suggested value for EC = $13 \text{ kg/ha/year} \times 0.75$ | = 9.75 kg/ha |
| Phosphorus – Based on estimates for mixed agricultural | Range 0.2 – 3.2 kg/ha/year ECi = 1 kg/ha/year |
| Suggested value for EC = 1 kg/ha/year \times 0.5 | = 0.5 kg/ha |
| Corn Nitrogen - Based on estimates for row crops $Suggested value for EC = 9 kg/ha/year \times 0.75$ | Range 2 – 80 kg/ha/year ECi = 9 kg/ha/year = 6.75 kg/ha/year |
| Phosphorus – Based on estimates for row crops $Suggested\ value\ for\ EC=2.2\ kg/ha/year\times0.5$ | Range 0.2 – 18.6 kg/ha/hr ECi = 2.2 kg/ha/year = 1.1 kg/ha |
| | |

Carbon

Carbon transport was considered to occur primarily as dissolved organic carbon since there is a considerable amount of tillage and burning of residue which would greatly reduce the export of particulate organic carbon. Export of carbon was based on dissolved carbon concentrations, soil fertility measurements, and export coefficients. Organic matter content in the study area ranges from 1 to 3 percent (University of Missouri 1996). Runoff coefficients for individual land covers were not available and estimates from Peterjohn and Correll (1984) were highly variable, 58.2 ± 61.3 . A winter value of 3.6 kg/ha

(Peterjohn and Correll 1984) was considered representative and an adjustment to account for land cover was not applied.

Suggested value for EC

= 3.6 kg/ha

Sediment

Export of sediment was based on suspended sediment concentrations (USGS data and STORET data) and reported daily loads (Holmes 1993). Sediment retention during inundation was estimated to be 10 percent since there is little evidence of sediment deposition following flooding in the study area. Suspended sediment concentrations were highly variable and ranged from 45 to 451 mg/L. Holmes (1993) reported a mean daily concentration of 317 mg/L and median daily load of 717,000 tons/day for the 1993 flood (measured in the Mississippi River at Thebes, IL). Corresponding values of 302 mg/L and 139,000 tons/day were presented for the period of record. These concentrations were somewhat higher than concentrations observed in the headwater region (e.g., USGS data from Morehouse, station 7024070); therefore, instantaneous sediment loads were estimated at 4.63 kg/sec based on concentrations and discharge measurements. A 60-day period of rain was used to calculate the total load which was then divided by the total area (184,855 ha) to estimate the initial export coefficient.

Suggested value for EC

= 130 kg/ha

After discussions with FWS personnel and agricultural experts, it was determined that export coefficients for with- and without-project scenarios were better representations of conditions if transport from the system prior to inundation (existing conditions) was considered. Under existing conditions, rainfall in November and December can result in high runoff or export. With the project in place, this same period results in retention of rainfall and a decrease in export. Therefore, export coefficients for Scenarios 2 and 3 that describe with-project conditions were further reduced by 50 percent to account for decreased loss associated with decreased runoff prior to inundation. Material retained or transported in the upland or agricultural land covers was then calculated in the spreadsheet using the following equations. Appropriate conversions were made to express mass in kilograms and runoff in kilograms per acre.

$$V_{lc} = (A_{lc}/A) \times V \tag{1}$$

where:

 V_{lc} = volume of land cover when inundated

 A_{lc} = area of selected land cover at the selected elevation, acres

A = total area at the selected elevation, acres

V = volume provided at selected elevation, acre-ft

10

$$Load = C \times V_{lc} \tag{2}$$

where C = concentration. This load is applied to land covers described as wetlands.

Or:

Load =
$$(C \times V_{lc}) + (A_{lc} \times EC)$$
 { $EC = EC \times 0.5$ for Scenarios 2 and 3} (3)

This load is applied to land covers described as upland or agricultural lands and includes the load from floodwater in addition to material exported from the land.

Wetland Function Value (expressed as a net load) = Load × Wetland Function Factor (4)

Net Yield (for wetland land covers) = \sum (Load + Wetland Function Value) (5)

Net Yield (for upland and agricultural land covers) =
$$\sum [(C \times V_{lc}) \times 0.90] + [(A_{lc} \times EC) \times \text{Wetland Function Factor}] (6)$$

The calculation assumes a 10 percent reduction in the load from inundation due to sedimentation. Separate loads, due to inundation, are added for scenarios with two hydrologic seasons (Scenarios 2 and 3) and the export from upland and agricultural lands is accounted for during season 1, which is the season when the maximum area is inundated.

The effect of the watershed on material processing (watershed function) can be expressed as a percentage of material retained or transported. Negative values indicate transport of material, and positive values indicate retention of materials.

Watershed Function =
$$[\sum(\text{Load}) - \sum(\text{Net Yield})/\sum(\text{Load})] \times 100$$
 (7)

Sensitivity Analysis

Since the wetland function factors and the export coefficients are simply an educated guess, the spreadsheet calculations were also conducted using wetland function factors at near maximum and minimum values, respectively, to define the range should each land cover function at a maximum or minimum level. To assess the sensitivity to concentrations in floodwaters, concentrations of nitrogen, phosphorus, and organic carbon from season 1 were doubled for season 2 and the analysis was recalculated for the New Madrid Floodway scenarios. Sensitivity to reductions in runoff associated with inundation was also assessed for the New Madrid Floodway scenarios by elimination of the 50 percent reduction in the available load used in Scenarios 2 and 3.

Evaluation of Project Impacts on Water Quality of the Mississippi River

Impacts on the water quality of the Mississippi River were described with evaluation of output from the spreadsheet and a water balance with discharge data from 1943 to 1974 and from 1975 to 1998 (Table 8). Limited water quality data for the Mississippi River was available from Hickman, KY, for 1969 and 1970 and from Thebes, IL, for 1994 through 1998. Data from USGS stations at New Madrid and Caruthersville, MO, were not applicable. While the data from Hickman are not very recent, and the data from Thebes represent values upstream from the confluence of the Mississippi River and the Ohio River, these data were the best available.

A mass balance approach was used to assess potential impacts of the project on the water quality of the Mississippi River. Existing conditions allow for periodic movement of water from the Mississippi River into the project area and result in mixing with headwaters in the area, transport of material to the area, and transport of material from the area. Hydrologic information provided by the Memphis District (Table 8) indicated that monthly means were highly variable during 1943 to 1974 and between 1975 and 1998. Mean values of 800,000 and 700,000 cfs were considered to represent volumes that would provide floodwaters at elevations of 290 and 282 ft, respectively. A period of 5 days was considered to represent the time of inundation of a representative flood, and relative volumes of headwaters and Mississippi River waters were then calculated for the flooded area. Concentrations for nitrogen, phosphorus, organic carbon, and suspended sediments for the headwaters and the Mississippi River were then multiplied by relative volumes to determine total mass available for each volume. The expected percent removed for each basin was then applied to the total mass available in the appropriate basin, and the difference to the total mass available in the Mississippi River was then expressed as a percentage.

Evaluation of Potential Changes in Pesticide Usage on Water Quality

A literature review was conducted to describe the transport of herbicides in surface and subsurface drainages in the region. Potential changes in pesticide use and pesticide impact on water quality were also evaluated based on existing water quality data for current conditions (current practices and existing acreage) and the qualitative extrapolation of potential increase in pesticide usage due to the project. Identification of the potential pesticide impact using the spreadsheet analysis was considered to be inappropriate since there were limited measurable concentrations in the study area. Experts at the University of Missouri Delta Research and Extension Service were consulted on potential changes in crops, pesticide application rates, and pesticide interactions with crop types and soils.

Data used to assess pesticide concentrations in the project area were extracted from the STORET retrieval database. Data from the USGS National Water-Quality Assessment (NAWQA) study and well-water data from the USDA

NRCS were also evaluated. Summary statistics for water quality data from surface sites are presented in Appendix B for detected pesticides. Pesticide data from the NRCS study and the NAWQA data (Morehouse and Rives stations) are included in Appendix B. Records from public drinking supplies in the area were also evaluated. Parameters with measurable concentrations at Morehouse were evaluated for application rates using distribution maps from the NAWQA Pesticide National Synthesis Project available at http://water.wr.usgs.gov/pnsp.

Evaluation of Potential Impacts to Big Oak Tree State Park

A mass balance approach was used to assess potential impacts of the project on the water quality that provides periodic flooding to Big Oak Tree State Park. Existing conditions, which allow for periodic movement of water and materials from the Mississippi River into and out of the area, would be prevented with the project. Periodic flooding with well water would be conducted to provide controlled hydrology to the area, but changes in water quality would occur as a result in changes in source water. Estimated concentrations for nitrogen, phosphorus, organic carbon, and suspended sediments for the headwater and groundwater were multiplied by relative volumes to determine total mass available for each volume. The change in mass was then expressed as a percentage for each constituent. Potential impacts of iron toxicity were evaluated with an assessment of iron concentrations in surface water and groundwater and a review of relative literature.

3 Results

Data in the original STORET retrieval represented 217 sites, but evaluation of the sites resulted in elimination of sites to a base of 89. Most of the sites eliminated were in the vicinity of Reelfoot Lake, TN, and were not considered to be representative of the study area. Data from 10 sites in Kentucky and 10 sites in Tennessee were retained since evaluation indicated that they were from the same aquifer, same ecoregion, or in the Mississippi River (Figure 1). Data collected ranged from 1969 to the present. Data recently collected (1994 through 1998) at Morehouse and Rives as part of the NAWQA program were also used. Summary statistics for water quality data from surface sites are presented in Appendix B and summarized in Table 9 for selected constituents. Water quality concentrations for selected constituents are depicted in Figures 2-14. Mean values are presented in Table 10. Concentrations used in the spreadsheet (Table 11) were also provided to other agencies for review and comment prior to use in the spreadsheet. Data for surface water sites were used to establish estimated concentrations used in the spreadsheet. Limited data were available for the Mississippi River (Hickman, KY) in the immediate vicinity of the project. Consequently, comparisons to headwater concentrations and other relationships as described for each constituent in the following were used to determine representative concentrations for the Mississippi River.

In general, water quality constituents represented the various sources of water, e.g., streams, effluents, or groundwater (wells); however, temporal trends in water quality were discernible for selected constituents. Dissolved oxygen concentrations were generally above 6 mg/L and near 12 mg/L in the winter and describe conditions in streams (Figure 2). The relatively low values observed in December and February were measured at well sites and are not indicative of surface water concentrations. Biochemical oxygen demand (measured as a 5-day demand, BOD₅) values were relatively low except for measurements in September and October, which ranged from near 2 to near 50 mg/L (Figure 3). All BOD₅ values reported were measured at effluents. Additional point source data (not in STORET) were available from MDNR and were limited to evaluations in the vicinity of the Sikeston and Charleston Municipal Wastewater Treatment Facilities. In general, these studies concluded that BOD and suspended solids in the effluents were often at or above permit values, which is consistent with other observations.

Nitrate/nitrite values were mostly below 2 mg/L in surface-water samples with effluent concentrations occasionally above 2 mg/L (Figure 4). Slightly higher values (between 2 and 4 mg/L) were observed in surface waters in

December of 1992 and at an effluent in September of 1976. Extremely high values observed at an effluent in May indicate anomalous data, which were not used in the data assessment. Organic nitrogen values were generally lower than nitrate/nitrite values (as suggested by concentrations observed at the Morehouse station) but limited data were available (Figure 5). Concentrations observed at the Morehouse and Rives stations were comparable to observations from the STORET retrieval. Seasonal trends in nitrogen concentrations were not apparent in the surface water samples.

Phosphorus concentrations were quite variable and total concentrations were relatively high with values often occurring greater than 0.1 mg/L (Figures 6 and 7). Dissolved phosphorus values were less variable than total phosphorus values and mostly remained near 0.05 mg/L. As observed for nitrogen species, concentrations of total phosphorus observed at the Morehouse and Rives stations were comparable to observations from the STORET retrieval, and seasonal trends were not apparent.

In general, evaluation of the limited data for nitrogen species suggested that total concentrations in the headwater were near 1.5 mg/L and concentrations in the Mississippi River may be lower (based on comparison of organic nitrogen concentrations (0.41 and 0.12 mg/L, respectively)). A value of 1.2 mg/L was recommended as an approximate concentration for total nitrogen in the Mississippi River. This value is within the range for various nitrogen forms observed at Thebes, IL (Appendix B), but was lower than most forms during November through March when flooding would be expected to occur. Mean total phosphorus concentrations (0.21 mg/L) were also higher in the headwater (consistent with soil fertility information) than in the Mississippi River (0.14 mg/L). Data from Thebes, IL (Appendix B), indicate that values between 0.1 and 0.2 mg/L can be expected for total phosphorus for the flood period.

Limited data for three wells in the project area provided by NRCS for 1997 through 1999 (July through September) indicated that nitrate concentrations were relatively low, i.e. <1 to 2 mg/L except for July 1988 observations at two sites that were greater than 10 mg/L. When values from STORET were included, median values of nitrate/nitrite concentrations in well water (0.22 mg/L) were lower than median values for surface waters (0.33 mg/L). Total phosphorus values reported for well water were relatively high (0.13 to 3.01 mg/L) and reflect high soil fertility in the area. Median values of total phosphorus in well water (0.44 mg/L) were higher than median values in surface water (0.167 mg/L). A more detailed comparison of concentrations in surface water and well water is presented later in this section.

Evaluation of the data for carbon indicated that most of the carbon is dissolved organic carbon, and measured values were often quite higher than observations of total carbon except at effluent sites (Figures 8 and 9). Lower concentrations of organic carbon were observed primarily in the fall season from September through November. A value of 4 mg/L of organic carbon was recommended for both the headwater and the Mississippi River. This value is comparable to values observed at Thebes, IL (Appendix B).

Evaluation of solids data indicated that suspended solids accounted for approximately 58 percent of the total residue in the headwater area (Figures 10 and 11). This relationship was used to calculate a value of 260 mg/L for the Mississippi River, which is within the range observed for data collected at Thebes, IL (Appendix B). Seasonal trends in total solids were not apparent, but suspended solids tended to be lower from late summer to mid-winter (August through January).

Limited discharge data were available for the project area, but data from the Morehouse and Rives sites may be used to describe general trends in runoff. In general, minimum discharge values were observed during the period August through November, although values at Rives were quite variable (Figure 12). Periods of lower discharge correlated with observations of lower concentrations.

Total and dissolved iron values were assessed to describe surface- and well-water concentrations to evaluate potential changes in concentrations associated with changing source water to Big Oak Tree State Park. With the exception of anomalous data, which were not included in the data analysis, concentrations in the surface waters were relatively similar to concentrations in well water (Figures 13 and 14), and higher concentrations in wells occurred primarily in Pemiscot County (Figure 15). In general, lower concentrations were observed in the late summer (August) and through mid-winter (January). Concentrations were mostly <1 mg/L and 3 mg/L, for dissolved and total iron, respectively.

Distribution of concentrations of total phosphorus, nitrate and nitrite nitrogen, organic nitrogen, ammonia, total Kjeldahl nitrogen, conductivity, and total alkalinity by water sources are presented in Figures 16-22. Total phosphorus concentrations for each water source are depicted in Figure 16. Concentrations in surface waters (STORET and NAWQA data) ranged from 0.026 to 0.89 mg/L with a mean value of 0.206 mg/L, and from 0.12 to 3.01 mg/L with a mean value of 0.684 mg/L in groundwater (wells from STORET and Mississippi and New Madrid Counties). Groundwater concentrations were more variable than surface-water concentrations. Median values of total phosphorus were 0.21 and 0.44 mg/L for surface water and groundwater, respectively. Nitrate concentrations were compiled were similar between water sources except for some elevated values observed in Mississippi County (Figure 17). In general, mean groundwater concentrations were greater than mean surface-water concentrations, but median values for groundwater (0.22 mg/L) were lower than median values for surface waters (0.31 mg/L). Limited data for concentrations of organic nitrogen indicated that the mean concentration in groundwater was higher than for surface water, but median values were lower as observed for nitrate concentrations (Figure 18). Distribution of ammonia nitrogen values indicated that surface-water values were lower than groundwater values, and median values were lower than mean values with most values less than 0.5 mg/L (Figure 19). Concentrations of total Kjeldahl nitrogen were available for surface waters and were generally less than 0.5 mg/L, but observations at NAWQA stations in the mid-1990s indicated occasional elevated concentrations between 1.5 and 3.5 mg/L (Figure 20). When mean and median values for nitrogen species (nitrate, ammonia, and organic nitrogen) are summed and compared between surface water and groundwater, mean groundwater concentrations are

approximately 3.9 mg/L and greater than mean surface-water concentrations of approximately 1.3 mg/L. However, comparison between summed median values are quite comparable (0.6 and 0.7 mg/L for surface water and groundwater, respectively).

Conductivity and total alkalinity data were also compared between water sources, but different methods for measuring conductivity make comparisons difficult. For example, data in STORET included field measurements and laboratory measurements while groundwater data from NRCS was reported as field measurements (Figure 21). In general, mean and median field measurements were lower than lab measurements (except for groundwater medians) and comparable between water sources. Data from groundwater sites in STORET and New Madrid County were the most variable. Total alkalinity data were only available from STORET. Mean and median groundwater values (near 200 mg/L as CaCO₃) were nearly twice surface-water values (near 110 mg/L as CaCO₃), although groundwater values were more variable (Figure 22).

Spreadsheet Analyses

Results of the spreadsheet analyses are summarized in Tables 12 and 13. All outputs are included in Appendix C, and results are summarized in Figures 23-30. In all scenarios, there was a net retention or removal of material from the water column, indicating that the basins do retain material. The expected net retention varied for each constituent between scenarios and basins; however, a general pattern was discernible. In general, Scenario 3, with the project alternative (avoid and minimize), yielded results similar to existing conditions with no flooding (Scenario 1). The project as authorized (Scenario 2) resulted in lower retention than Scenarios 1 and 3 but greater retention than Scenarios 4 and 5 (extreme and moderate high flows, respectively). Greater differences in net retention were observed for nitrogen and sediment. Relatively minor differences were observed between scenarios for organic carbon.

Sensitivity analyses using different export coefficients and concentrations in Scenarios 2 and 3 resulted in very little differences in the percent material retained. High and low retention factors applied to all scenarios resulted in very little difference between scenarios in net retention.

Evaluation of Project Impacts on Water Quality of the Mississippi River

Potential impacts on the water quality of the Mississippi River are summarized as percent decreases in material loading to the river relative to a moderate high flow event (Scenario 5) and with the alternative project (Scenario 3) in Table 14. In both Scenarios 5 and 3, the percent decrease in the material load for each constituent evaluated was 0.1 percent or less. This is consistent with water balances conducted for the project that indicated a ratio of

basin water (22,840 cfs/day) to Mississippi River water with basin water (22,840 cfs/day + 4,000,000 cfs/day) equal to 0.0057. These values are indicative of a moderate high flow event.

There is a potential for a reduction in the transport of material from the study area to the Mississippi River with a change in the flooding period to early winter with the project in place. This change in hydrology should reduce the transport of particulate material from fallow agricultural lands, although an increase in soluble material could occur with inundation. Conversely, a reduction in the backwater flooding of Mississippi River water would result in a decrease in the retention of material from the river that would be processed during flooding. Based on the above water and material balance, it seems reasonable that the change in material processing with and without the project would not be discernible.

Evaluation of Potential Changes in Pesticide Usage on Water Quality

Based on information provided by the University of Missouri Delta Research and Extension Service, it is estimated that 95 percent or more of the corn in the project area will be treated with atrazine at a rate of approximately 2 lb active ingredient per acre (ai/acre). Post-emergence application will be applied to approximately 75 percent and pre-emergence treatment rates will be between 1 and 2 lb ai/acre. About 50 percent of the land receiving pre-emergence treatments will likely receive a second application between 0.5 and 1.5 lb ai/acre. Farmers use arithmetic to keep total atrazine applications below 2.5 and 2 lb ai/acre on a single application.

The literature review indicated that the potential contamination to water resources from atrazine application to corn and corn/soybean rotation is rather limited (Appendix D). The primary concern appears to be the relationship between application time and precipitation frequency. The worse scenarios for surface-water contamination are high flow events immediately following application. Groundwater concentrations appear to be the highest during low runoff precipitation events in which high atrazine rates are applied year after year at the same location. However, due to the type of soil associations prevalent in the study area, infiltration or percolation of pesticides should be of minor importance.

Public drinking supplies in Southeast Missouri (Boothill region) have little or no record of contamination from pesticides.¹ Well-water samples collected from public drinking supplies in the region have had two instances of pesticide detection, one which was attributed to contamination of the community drinking well with a lake.¹ The lake has been sampled and found positive to pesticide contamination and so has the well.

18 Chapter 3 Results

_

¹ Personal Communication. Terry Timmons, 1999, Missiouri Department of Natural Resources, Jefferson City, MO.

In general, pesticide concentrations were relatively low in the study area. The samples were for wells, and all surface samples were below the drinking water quality criteria for pesticides (Table 15). The USDA NRCS 1997-1999 well-water data showed that all pesticide samples were below detection and thus below the drinking water standards. Data are presented in Appendix B. Several pesticide concentrations, although given the nondetect (ND) flag, showed apparent concentration, a value that either was estimated by the analyst or the blank was higher that the sample analysis.

Table 16 shows pesticides in surface runoff, either dissolved in water or in the particulate form, at the Morehouse station of the NAWQA study. All the values are lower than the drinking water quality criteria for pesticides. Figures 31-39 show pesticides found at a greater frequency (more than eight times) than those at the Morehouse station (Table 16). Simazine, a corn herbicide used moderately in the project area, maximum concentration did not exceed the drinking water standards. Prometon, a triazine herbicide, was detected in multiple samples but at all times was below the drinking water standards. Atrazine, a corn herbicide used in the project area, was detected in multiple samples at the Morehouse station, and the values were over the drinking water standards in more than two-thirds of the samples. Maximum atrazine concentration was around 20 µg/L. The degradation product of atrazine (diethyl atrazine) was also detected in the NAWQA study with maximum values below 0.7 µg/L. Propoxur, Permethrin, DCPA, Silvex, and Tebuthiuron were detected in the study but were very close to the detection level and lower than the drinking water standard (if a standard is available for the pesticide).

Evaluation of Potential Impacts to Big Oak Tree State Park

Results of a hypothetical mass balance used to assess potential impacts at Big Oak Tree State Park are summarized in Table 17. Groundwater values were assumed to be lower for all constituents evaluated, and the percent change between water sources becomes a factor of concentration differences if the percentage of material retained by the park is considered to be the same for each source of water. As a result, the change in mass available to the site was estimated as 20 percent for nitrogen, 25 percent for phosphorus, 50 percent for dissolved organic carbon, and 99 percent for sediments. However, water quality assessments indicated very little differences in nitrogen and phosphorus concentrations in surface water and groundwater (Figures 16-20). Equal or higher concentrations of nitrogen and, in particular, phosphorus could also be used in the estimates, resulting in a net gain of these nutrients. For example, using a higher concentration of total phosphorus for groundwater (e.g. 0.4 mg/L, which is well within the range of observations) would result in a net gain of 100 percent of the phosphorus supplied by surface waters. The increase in mass would be primarily in the dissolved form as opposed to both dissolved and particulate (e.g. sediment-bound) forms in the surface water. These are estimates based on approximated concentrations and do not account for seasonal variations in concentrations.

Iron was identified as the major metal of concern and the potential for toxicity was specifically identified as the concern. Iron concentrations were similar for surface water and well water, and the change in source water would not alter concentrations currently provided to the site. The major difference would be in the form of iron available in the groundwater and the surface water. Typically, iron in groundwater is predominately in the reduced state (Fe²⁺, ferrous iron) since the water is void of dissolved oxygen (anaerobic) and in the oxidized state (Fe³⁺, ferric iron) in surface waters that are oxygenated unless isolated by stratification. The reduced form of iron is potentially toxic to plants via oxidation of reduced iron in the soil at the oxidized root zone and the formation of a ferric coating or plaque that may inhibit the uptake of required nutrients (Gambrell and Patrick 1978; Taylor, Crowder, and Rodden 1984). Development of these conditions in wetlands is possible and can influence species distribution (Talbot and Etherington 1987), yet some species are more tolerant to high ferrous concentrations than others in the same community (Snowden and Wheeler 1993). Taylor, Crowder, and Rodden (1984) observed maximum formation of iron plaque coincident with increased concentrations of Fe²⁺ and pH values between 3 and 4.6. Although plaque formation occurred at iron concentrations as low as 5 to 10 mg/L, there was no plaque formation when the iron was in the Fe³⁺ form and pH was greater than 4.6. The later (oxidized iron and pH > 4.6) are more likely conditions in Big Oak Tree State Park. In a survey of flora of Big Oak Tree State Park, Oskins Doolen (1984) provided a list of plants that was compared to plants used in the study by Snowden and Wheeler (1993). Although a bottomland hardwood is not a fen, and flora species would be expected to be different, several species were observed in both systems and genera common to both spanned the range of 'very tolerant,' 'semi-tolerant,' 'moderately sensitive,' and 'very sensitive' clusters used by the authors. A ferrous iron concentration of 3.8 mg/L was used as the control and concentrations of 10, 25, 50, 75, and 100 mg/L of ferrous iron were used in the study. In general, Carex spp. (sedges), Phalaris, and Ranunculus (buttercup) were considered to be very tolerant to semi-tolerant, and red clover (introduced) and goose grass and Rumex sp. were moderately sensitive to very sensitive. Most of the iron toxicity information in the literature describes grasses, shrubs, and rice; information on adult trees was not available.

4 Discussion

In general, water quality is indicative of basins that are dominated by agricultural activities. General trends observed included low to moderate nitrogen concentrations, relatively high phosphorus concentrations, moderate to high organic carbon concentrations, and low to moderate sediment concentrations. Increased concentrations of these constituents likely occur associated with runoff events. Extreme values were most frequently observed at point sources in the study area. Limited data precluded detailed statistical analyses of spatial and temporal trends, but plots of data from a variety of sites and collection periods allowed some empirical assessment. Seasonal trends were observed for some constituents, but concentration ranges were relatively narrow, suggesting that annual trends were not apparent. Spatial trends were mostly associated with point source and well-water data.

Potential impacts of the project on the water quality of the Mississippi River appear to be minimal based on the assumptions used in the spreadsheet analyses. Although this approach does not adequately describe the processing of material by each land cover, the use of relative function factors for each land cover type does allow the evaluation of scenarios with and without the project for a relative comparison since the same function factors are applied in each scenario. While more detailed process information would improve the application, the relatively low volume of water in the basin relative to the volume of water in the Mississippi River results in little impact from a mass balance perspective. Comparisons of concentrations in the two sources of water indicated relatively similar concentrations, suggesting that changes in concentrations associated with the project are not likely to be discernible. Mitsch et al. (1979) observed very little differences in spatial patterns on different floodplain sites during flooding in the Kankakee River basin in northeastern Illinois, supporting the assumption of equal concentrations in a floodway during inundation.

National studies have shown that pesticides and their transformation products are commonly present at low concentrations in groundwater beneath agricultural areas, and only seldom at concentrations that exceed water quality standards. For the five multi-state studies carried out to date, which focused mainly on agricultural areas, the proportions of sampled wells with pesticide detection ranged from 4 percent (nationwide, rural domestic wells) to 62 percent (cornand-soybean areas of the northern mid-continent, post-planting) (USEPA 1994, USGS 1995). Pesticide concentrations were 1 μ g/L or less in over 95 percent of the wells sampled during these studies (USEPA 1994).

Chapter 4 Discussion 21

Missouri water quality studies including the Management Systems Evaluation Areas, Agricultural Systems for Environmental Quality, and Mississippi Embayment programs have shown that surface-water impacts from pesticide runoff are a major concern in the state. In 1994, 10 public drinking water supplies (surface water) received notices of violation (NOV) for exceeding the Maximum Contaminant Level (MCL) for atrazine (3 µg/L) (Smith, Blanchard, and Johnson 1999). Two northern Missouri public drinking water supplies received NOVs during 1997-1998. However, there was little evidence of atrazine contamination in public drinking waters in the area, suggesting that pesticide contamination of wells is minimal. However, occasional observations of high concentrations in surface waters indicate contamination to shallow wells is possible. It is a feasible assumption that, through adoption of best management practices (BMPs), in combination with monitoring efforts, atrazine contamination to water resources can be maintained below the MCL.

The potential increase in corn acreage due to the project is 5,800 acres, or 4.4 percent of the project area (133,000 acres). A 5 percent increase in corn should not change the behavior of pesticide application and runoff, so conditions expected for increased acreage should be similar to existing conditions. The change in soybean practices from current conditions to a higher yield/longer season soybeans should not have significant water quality impacts due to the longer season. If current practices are maintained, future potential impacts should be similar to those observed in similar or current agricultural settings.

Double crops and the increase in double cropping should not have a major water quality impact in the area. Double cropping could help in minimizing the runoff potential in early spring by providing a crop cover for those months with high runoff potential. The availability of parts of the project area for double cropping should be a function of the winter storage requirements and the start of the planting season for the first crop in the double crop cycle. Pesticide requirements in double crops could be higher, but herbicide use might decrease because the first crop can decrease the germination of weeds harmful to the second crop, the cultivation in between the two crops, and the rotation of crops.

Although operation of the pumping stations to remove floodwaters may occur during the early part of the growing season, increased runoff of atrazine is expected to be minimal with anticipated application rates and practices. Exceptions could occur in very well drained areas, but since these areas comprise only a minor portion of the area, adverse impacts are not expected to occur. As mentioned previously, the use of BMPs in more vulnerable areas should be considered to further reduce the potential for adverse impacts.

The evaluation of potential impacts to Big Oak Tree State Park indicates that the nutrient supply to the system may vary by about ± 20 percent for nitrogen and between -25 and +100 percent for phosphorus with a change in source water from floodwater to groundwater. The range of change is dependent upon the concentration used in the estimates (see Table 17). Because the park is not inundated with floodwater every year, the net change in nitrogen and phosphorus to the park could be considerably less since the controlled hydrology would supply these nutrients more frequently than floodwaters. Additionally, variability

22 Chapter 4 Discussion

in surface-water and groundwater data was relatively high, and the actual change in supply of nitrogen and phosphorus is more likely to be lower if similar concentrations exist in the two sources. More profoundly, the supply of organic carbon and sediments to the site is estimated to decrease by 50 and 99 percent, respectively. These may be underestimates since the supply of particulate organic carbon will likely decrease by 80 to 100 percent, i.e., there are no organic particulates in well water. However, since bottomland hardwoods typically export dissolved organic carbon, there may be a net reduction in carbon export that would be beneficial to receiving waters. Nutrient supply associated with sediment transport will also be greatly decreased with the exclusive use of well water. However, comparison of median values in well water and surface waters indicated that the supply of nutrients from either source may be similar, but nutrients from the well water would be dissolved. The availability and retention of sediments and sediment bound nutrients to the site were not evaluated.

While the change in supply of material to the site is a potential for impact, concentrations/masses necessary for continued viability are not known and not easily determined. Also, the contribution of material during extreme events has not been evaluated and the impact of the loss of contributions during these episodic events is not clear. The impacts of potential reductions in particulate organic carbon and sediment supply to Big Oak Tree State Park are not easily quantified and comparison to internal sources is not possible with the available data.

Larson et al. (1992) suggested that the return of hydrologic regimes similar to conditions prior to extensive agricultural development (e.g., 75 years ago) was critical to the survivability of the park. If indeed the restoration of hydrology is critical and can be accomplished with supplemental groundwater, the opportunity to offset the potential reductions in sediments using surface water when available, in lieu of well water, should be considered.

The potential for iron toxicity to adversely impact the flora of Big Oak Tree State Park is considered to be minimal. Evaluation of available iron data for groundwater indicated that elevated concentrations (e.g., >10 mg/L) occurred in Pemiscot County and not in the immediate vicinity of the park. Furthermore, the introduction of reduced (ferrous, Fe²⁺) iron via artesian wells will result in a rapid oxidation to the ferric form which will be retained on the soil surface and not formed at the oxidized root zone. There will be a potential for accumulation and subsequent burial of the ferric form in a limited area around each well. The potential for iron deposition would be reduced with the use of surface water when available. The rapid oxidation of iron would also allow for collection or accumulation if the area around the well included a small detention basin or rock layer.

Chapter 4 Discussion 23

5 Conclusions

Water quality with the project alternative should be similar to conditions that exist during periods of no flooding. Material processing should be similar between these two scenarios as well. The basin most likely retains or removes material from headwaters and floodwaters; this process is maximized during lowwater periods (Scenario 1) and is comparable with the alternative project (Scenario 3). There is likely a considerable difference in the amount of material processed (amount increases with flow) but the relative processing between Scenario 1 and Scenario 3 yielded similar results.

Impacts to the water quality of the Mississippi River with the proposed or alternative project in place are not expected to be discernible due to the overwhelming volume of water in the Mississippi River relative to floodwater volume in the project area.

The impact of pesticides, atrazine in particular, on public groundwater resources is expected to be minimal. Furthermore, the impacts to shallow water resources, i.e., private wells, are also expected to be minimal. A greater potential exists for atrazine contamination to surface waters. The optimal method for reducing this likelihood is the implementation of BMPs. It is a feasible assumption that through adoption of BMPs, in combination with monitoring efforts, the atrazine contamination to water resources can be maintained below drinking water standards. A 5 percent increase in corn should not change the behavior of pesticide application and runoff, so conditions expected for increased acreage should be similar to existing conditions.

The restoration of historical, or a more typical, hydrology to Big Oak Tree State Park is likely one of the most critical processes for the recovery and sustainability of the park. However, potential impacts to Big Oak Tree State Park with the project may occur with the use of groundwater as the only supplement since there is a potential for a decrease in the supply of sediments. These potential decreases may be offset with the use of surface water when available. A comparison to bottomland hardwood areas in the St. Johns Basin (which have been isolated from floods) should be considered to further identify the potential for impacts at Big Oak Tree State Park. Dissolved iron concentrations were similar for surface-water and well-water sites, and the change in source water would not alter concentrations currently provided to the site.

24 Chapter 5 Conclusions

References

- Adamus, P. R., Stockwell, L. T., Clairain, Jr., E. J., Morrow, M. E., Rozas, L. P., and Smith, R. D. (1991). "Wetland evaluation technique (WET), Volume I: Literature review and evaluation rationale," Technical Report WRP-DE-2, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Ashby, S. L., Sturgis, T. C., Price, C. B., Brannon, J. M., and Pennington, J. C. (1991). "Water quality studies in the upper watershed of Steele Bayou, Mississippi," Miscellaneous Paper EL-91-23, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- 3. Beaulac, M. N., and Reckhow, K. H. (1982). "An examination of land use Nutrient export relationships," *Wat. Res. Bull.* 18(6):1013-1024.
- 4. Brinson, M. M., Bradshaw, H. D., and Kane, E. S. (1984). "Nutrient assimilative capacity of an alluvial floodplain swamp," *J. of Applied Ecology* 21, 1041-1057.
- 5. Conner, W. H., and Day, J. W., Jr. (1991). "Leaf litter decomposition in three Louisiana freshwater forested wetland areas with different flooding regimes," *Wetlands* 11(2):303-312.
- 6. Cooper, A. B. (1990). "Nitrate depletion in the riparian zone and stream channel of a small headwater catchment," *Hydrobiologia* 202, 13-26.
- 7. DeLaune, R. D., Boar, R. R., Lindau, C. W., and Kleiss, B. A. (1996). "Denitrification in bottomland hardwood wetland soils of the Cache River," *Wetlands* 16(3):309-320.
- 8. Dortch, M. S. (1996). "Removal of solids, nitrogen, and phosphorus in the Cache River wetland," *Wetlands* 16(3):358-365.
- 9. Gambrell, R. P., and Patrick, W. H., Jr. (1978). "Chemical and microbiological properties of anaerobic soils and sediments." *Plant Life in Anaerobic Environments*. D. D. Hook and R. M. M. Crawford, eds., Ann Arbor Sci. Pub. Inc., Ann Arbor, MI, 375-423.

References 25

- Harris, L. D., and Gosselink, J. G. (1990). "Cumulative impacts of bottomland hardwood forest conversion on hydrology, water quality, and terrestrial wildlife." *Ecological Processes and Cumulative Impacts: Illustrated by Bottomland Hardwood Wetland Ecosystems*. J. G. Gosselink, L. C. Lee, and T. A. Muir, eds., Lewis Publishers, Inc., Chelsea, MI.
- 11. Holmes, R. R., Jr. (1993). "Sediment transport in the lower Missouri and the central Mississippi Rivers June 26 through September 14, 1993," *Floods in the Upper Mississippi River Basin, 1993*, USGS Circular 1120-1.
- 12. Kadlec, R. H. (1997). "An autobiotic wetland phosphorus model," *Ecol. Eng.* 8, 145-172.
- 13. Killpack, S. C., and Buchholz, D. (1993). "Nitrogen in the environment: Nitrogen replacement value of legumes," Water Quality Initiative Publication WQ277, University of Missouri, Columbia, MO.
- 14. Kleiss, B. A. (1996). "Sediment retention in a bottomland hardwood wetland in eastern Arkansas," *Wetlands* 16(3), 321-333.
- 15. Larson, B. D., Journet, A. R. P., and Taylor, S. H. (1992). "Distribution and age classes of tree species in the cypress forest of Big Oak Tree State Park, Southeast Missouri," Technical Report, Missouri Department of Natural Resources.
- 16. Lindau, C. W., DeLaune, R. D., and Pardue, J. H. (1994). "Inorganic nitrogen processing and assimilation in a forested wetland," *Hydrobiologia* 277, 171-178.
- 17. Lowrance, R., Todd, R., Fail, J., Jr. Hendrickson, O., Jr. Leonard, R., and Asmussen, L. (1984). "Riparian forests as nutrient filters in agricultural watersheds," *Bioscience* 34(6), 374-377.
- 18. Luckey, R. R., and Fuller, D. L. (1984). "Water resources of the southeast lowlands, Missouri," USGS Water-resources investigations report 84-4277.
- 19. Mitsch, W. J, Rust, W., Behnke, A., and Lai, L. (1979). "Environmental observations of a riparian ecosystem during flood season," Research Report 142, UILU-WRC-79-0142, University of Illinois at Urbana-Champaign, Water Resources Center, Urbana, IL.
- 20. Oskins Doolen, W. S. (1984). "The vascular flora of Big Oak Tree State Park, Mississippi County, Missouri," Master's Thesis, Southern Illinois University.
- 21. Peterjohn, W. T., and Correll, D. L. (1984). "Nutrient dynamics in an agricultural watershed: Observations on the role of a riparian forest," *Ecology* 65(5), 1466-1475.

26 References

- 22. Pinay, G., and Decamps, H. (1988). "The role of riparian woods in regulating nitrogen fluxes between the alluvial aquifer and surface water: A conceptual model," *Regulated Rivers: Research and Management* 2, 507-516.
- 23. Raisin, G. W. (1996). "The role of small wetlands in catchment management: Their effect on diffuse agricultural pollutants," *Int. Revue ges. Hydrobiol.* 81(2), 213-222.
- 24. Smith, M. B., Blanchard, P. E., and Johnson, G. S. (1999). *Atrazine Management and Water Quality*. Manual 167, Extension Publications, University of Missouri-Columbia, Columbia, MO.
- 25. Snowden, R. E. D., and Wheeler, B. D. (1993). "Iron toxicity to fen plants," *J. Ecology* 81, 35-46.
- 26. Talbot, R. J., and Etherington, J. R. (1987). "Comparative studies of plant growth and distribution in relation to waterlogging, XIII, The effect of Fe2+ on photosynthesis and respiration of *Salix caprea* and *S. cinerea* ssp. *oleifolia*," *New Phytologist* 105, 575-583.
- 27. Taylor, G. J., Crowder, A. A., and Rodden, R. (1984). "Formation and morphology of an iron plaque on the roots of *Typha latifolia* L.grown in solution culture," *Amer. J. Bot.* 71(5), 666-675.
- 28. University of Missouri. (1996). "Missouri soil fertility and fertilizers research update, 1995," Agronomy Miscellaneous Publication 96-03.
- 29. U.S. Environmental Protection Agency. (1999). "Drinking water regulations and health advisories," Office of Water, (http://www.epa.gov/OST/Tools/dwstds.html), accessed on 5/25/99.
- 30. ______. (1994). "Database documentation for the National Pesticide Survey," Section Three.
- 31. U.S. Geological Survey. (1995). "Pesticides in ground water," U.S. Geological Survey Fact Sheet FS-244-95, http://water.wr.usgs.gov/pnsp/gw/.
- 32. Weller, D. E., Jordan, T. E., and Correl, D. L. (1998). "Heuristic models for material discharge from landscapes with riparian buffers," *Ecological Applications* 8(4), 1156-1169.

References 27

Table 1. Land Cover Area in the New Madrid Floodway

| Cover | Acres at |
|-------------|----------|----------|----------|----------|----------|----------|
| | 275 ft | 280 ft | 282 ft | 285 ft | 290 ft | 300 ft |
| Cypress/ | 6.7 | 43.3 | 88.9 | 171 | 496.1 | 692 |
| Tupelo | | | | | | |
| Scrub/ | 0 | 1.4 | 3.1 | 10.8 | 80.3 | 364.4 |
| Shrub marsh | | | | | | |
| Pasture | 1.7 | 4.3 | 7.7 | 9.9 | 101.8 | 340.7 |
| Open Water | 0.9 | 9.8 | 121.9 | 170.8 | 592.2 | 687 |
| Marsh | 0 | 0.1 | 0.1 | 0.2 | 1.6 | 87.1 |
| Sandbar | 0 | 0 | 0 | 0 | 0 | 0.2 |
| Cotton | 0.8 | 1.9 | 2.6 | 5.2 | 82.8 | 288.6 |
| Cotton/ | 0 | 0 | 0.1 | 6.5 | 224.8 | 643.7 |
| Soybean | | | | | | |
| Soybean | 18 | 53.6 | 320.9 | 1500.4 | 11450.7 | 52577.2 |
| Soybean/ | 0 | 0.1 | 0.3 | 2.4 | 6 | 77.9 |
| Corn | | | | | | |
| Corn | 0.1 | 0.6 | 0.9 | 3.7 | 72.4 | 8211.8 |
| Herbacious | 2.9 | 20.6 | 48.3 | 113.1 | 836.7 | 3881.1 |
| Vegetation | | | | | | |
| Bottomland/ | 42 | 158.8 | 244.5 | 375.5 | 3345 | 7221.2 |
| Hardwood | | | | | | |
| Riparian | 0.1 | 0.1 | 0.1 | 0.1 | 0.5 | 0.5 |
| River | 0 | 0 | 1.1 | 1.1 | 2.2 | 4.4 |
| Total | 73.1 | 294.6 | 840.4 | 2370.8 | 17293.3 | 75077.7 |

Table 2. Land Cover Area in St Johns Bayou

| Cover | Acres at |
|------------|----------|----------|----------|----------|----------|----------|
| | 275 ft | 280 ft | 282 ft | 285 ft | 290 ft | 300 ft |
| Cypress/ | 15.32 | 80.22 | 101.09 | 250.07 | 485.21 | 686.78 |
| Tupelo | | | | | | |
| Pasture | 3.38 | 18.18 | 22.92 | 52.73 | 102.57 | 176.21 |
| Open Water | 8.95 | 30.89 | 44.74 | 112.71 | 144.21 | 274.41 |
| Marsh | 0 | 0 | 0 | 0 | 2.05 | 82.98 |
| Cotton | 6.77 | 10.89 | 16.58 | 62.97 | 90 | 416.29 |
| Cotton/ | 0 | 0 | 0 | 2.45 | 54.48 | 765.66 |
| Soybean | | | | | | |
| Soybean | 18.42 | 153.73 | 292.73 | 1743.91 | 5842.45 | 35842.36 |
| Soybean/ | 0 | 0 | 0 | 0.01 | 1.44 | 24.42 |
| Corn | | | | | | |
| Corn | 0.04 | 0.37 | 0.46 | 1.22 | 78.44 | 7497.07 |
| Herbacious | 6.81 | 25.06 | 41.2 | 194.02 | 589.25 | 3742.00 |
| Vegetation | | | | | | |
| Bottomland | 28.3 | 171.72 | 258.37 | 739.84 | 2316.24 | 5105.42 |
| Hardwood | | | | | | |
| Riparian | 21.29 | 34.25 | 47.27 | 71.34 | 147.63 | 372.1 |
| River | 0 | 0 | 0 | 0 | 0 | 12.56 |
| Total | 109.29 | 525.29 | 825.38 | 3231.26 | 9853.96 | 54998.24 |

Table 3. Hydrologic scenarios for the New Madrid Floodway and St. Johns Bayou

| | to section to the new r | | |
|-------------------------|-------------------------|------------------|--------------|
| Scenario | Elevation (ft NGVD)* | Volume (acre-ft) | Water Source |
| New Madrid | | | |
| Floodway | | | |
| 1 Baseline | 275 | 388 | Headwater |
| 2 Authorized | | | |
| Season 1 | 285 | 6707 | Headwater |
| Season 2 | 280 | 1098 | Headwater |
| 3 Avoid/Minimize | | | |
| Season 1 | 282 | 2190 | Headwater |
| Season 2 | 280 | 1098 | Combined |
| 4 Extreme Flood | 300 | 515089 | Combined |
| 5 Moderate Flood | 290 | 45305 | Combined |
| St. Johns Bayou | | | |
| 1 Baseline | 275 | 644 | Headwater |
| 2 Authorized | | | |
| Season 1 | 285 | 7298 | Headwater |
| Season 2 | 280 | 1692 | Headwater |
| 3 Avoid/Minimize | | | |
| Season 1 | 282 | 3080 | Headwater |
| Season 2 | 280 | 1692 | Combined |
| 4 Extreme Flood | 300 | 310381 | Combined |
| 5 Moderate Flood | 290 | 34372 | Combined |

^{*} Elevation in feet referenced to the National Geodetic Vertical Datum.

Table 4. Wetland function factors for land covers and selected water quality constituents*

| Land Cover | Effect on floodwater Reference | - | Function |
|----------------|---|------|----------|
| Type | Entert on noodwater | , 05 | Factor |
| Cypress/Tupelo | Nitrogen – Removes (4, 5, 7,1 | 16) | 8 |
| Jr | Phosphorus – Removes (5, 8,1 | | 4 |
| | Carbon – Converts POC to DOC and exports DOC (2) | | .8 |
| | Sediment – Removes via sedimentation (1) | | 8 |
| Scrub/Shrub | Nitrogen – Removes – similar to Cypress/Tupelo | | 8 |
| Marsh | Phosphorus – Removes similar to Cypress/Tupelo | | 4 |
| | Carbon – Converts POC to DOC and exports DOC | | .8 |
| | Sediment – Removes via sedimentation | | 8 |
| Marsh | Nitrogen – Removes similar to Cypress/Tupelo | | 8 |
| | Phosphorus – Removes similar to Cypress/Tupelo | | 4 |
| | Carbon – Converts POC and DOC and exports DOC | | .8 |
| | Sediment – Removes via sedimentation | | 8 |
| Bottomland | Nitrogen – Removes – similar to Cypress/Tupelo | | 8 |
| Hardwood | Phosphorus – Removes – similar to Cypress/Tupelo | | 4 |
| | Carbon – Converts POC to DOC and Exports DOC | | .8 |
| | Sediment – Removes via sedimentation | | 8 |
| Riparian | Nitrogen – Removes (5, 2 | 22) | 8 |
| | Phosphorus – Removes via filtration | | 5 |
| | Carbon – Removes via filtration | | 5 |
| | Sediment – Removes via filtration | | 5 |
| Sandbar | Nitrogen – Removes via filtration | | 2 |
| | Phosphorus – Removes via filtration | | 2 |
| | Carbon – Removes via filtration | | 2 |
| | Sediment – Removes via filtration | | 2 |
| Open Water | Nitrogen – Removes via sedimentation, denitrification | | 3 |
| | Phosphorus – Removes via sedimentation | | 2 |
| | Carbon – Removes via sedimentation | | 2 |
| | Sediment – Removes via sedimentation | | 2 |
| River | Nitrogen – Removes via sedimentation, denitrification | | 2 |
| | Phosphorus – Removes via sedimentation | | 1 |
| | Carbon – Removes via sedimentation | | 1 |
| | Sediment – Removes via sedimentation | | 1 |

^{*} POC = Particulate organic carbon. DOC = Dissolved organic carbon.

Table 5. Summary and ranking of export values for nitrogen and phosphorus for selected

land cover types

| Cover Type | N export | Rank | P export | Rank |
|----------------|------------|------|------------|------|
| | (kg/ha/yr) | | (kg/ha/yr) | |
| Forest | 2.5 | 1 | 0.2 | 1 |
| Nonrow crops | 6.5 | 4 | 0.7 | 2 |
| (small grains) | | | | |
| Pasture | 5.0 | 2 | 0.75 | 3 |
| Mixed | 14 | 6 | 0.8 | 4 |
| agriculture | | | | |
| Urban | 5.1 | 3 | 1.1 | 5 |
| Row crops | 8.5 | 5 | 2.3 | 6 |

Table 6. Watershed mass balances (Peterjohn and Correll 1984)

| Season | | itation | Nitrate-N | Ammonium-N | Organic-N | Total-P | Ortho-P | Organic-C |
|-----------|-----------|-------------------|----------------|------------|-----------|-------------|---------|-----------|
| | (100m | ³ /ha) | (kg/ha) | (kg/ha) | (kg/ha) | (kg/ha) | (kg/ha) | (kg/ha) |
| Bulk | | | | | | | | |
| Precip. | | | | | | | | |
| Spring | 25.4 | | 1.20 | 1.12 | 3.39 | 0.284 | 0.058 | 13.9 |
| Summer | 29.7 | | 1.26 | 0.785 | 1.43 | 0.068 | 0.025 | 11.2 |
| Fall | 18.9 | | 0.95 | 0.540 | 0.11 | 0.055 | 0.035 | 5.7 |
| Winter | 26.5 | | 1.36 | 0.385 | 1.67 | 0.029 | 0.019 | 5.6 |
| Ann. | 108 ± | | 4.79 ± | 2.59 ± | 6.01 ± | $0.810 \pm$ | N/A | 43.1 ± |
| Mean | 21.8 | | 1.18 | 0.56 | 1.15 | 0.278 | | 6.81 |
| Fertiliz. | N/A | | 10.1 14.9 42.2 | | 42.2 | 12.5 | 12.5 | N/A |
| Disch. | Slow Fast | | | | | | | |
| Spring | 6.2 | 0.6 | 0.532 | 0.197 | 0.58 | 0.251 | 0.116 | 153 |
| | 6 | 9 | | | | | | |
| Summer | 3.2 | 0.8 | 0.428 | 0.089 | 1.04 | 0.926 | 0.111 | 9.23 |
| | 0 | 0 | | | | | | |
| Fall | 0.6 | 0.0 | 0.007 | 0.007 | 0.03 | 0.010 | 0.007 | 0.4 |
| | 2 | 4 | | | | | | |
| Winter | 11. | 0.1 | 1.53 | 0.060 | 0.39 | 0.104 | 0.055 | 3.6 |
| | 5 | 2 | | | | | | |
| Ann. | 29. | 5.0 | 4.15 ± | 0.434 ± | 9.17 ± | 1.72 ± | 0.622 ± | 58.2 ± |
| Mean | 6± | <u>+</u> | 3.06 | 0.124 | 10.2 | 1.47 | 0.407 | 61.3 |
| | 14 | 4.5 | | | | | | |

Table 7. Watershed mass balances for the riparian zone of an agricultural watershed (Lowrance et al. 1984)

| | Inputs* | Inputs | Inputs | Outputs* | Outputs | Outputs | Outputs |
|----|---------------|------------|------------|------------|-----------------|----------------------|--|
| | Precipitation | Subsurface | N Fixation | Streamflow | Denitrification | Above ground storage | Balance Input – (Output+ Storage) |
| N | 12.2 | 29.0 | 10.6 | 13.0 | 31.5 | 51.8 | - 44.5 |
| P | 3.5 | 2.1 | | 3.9 | | 3.8 | - 2.1 |
| Ca | 5.2 | 47.4 | | 31.8 | | 40.3 | - 18.5 |
| Mg | 1.4 | 18.1 | | 15.0 | | 6.1 | - 1.6 |
| K | 3.9 | 19.5 | | 22.2 | | 18.6 | - 17.4 |
| Cl | 21.4 | 83.5 | | 97.0 | | | 7.9 |

^{*} All units are kg/ha/year.

Table 8. Monthly discharge (1000 cfs) for the Mississippi River at Hickman, KY

| 1 00010 | Tuble 6. Within y disentinge (1000 ets) for the Withshippi ferver at Thekinan, 121 | | | | | | | | | | | | |
|---------|--|------|------|------|------|--------|------|-----|-----|-----|-----|-----|-----|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Ann |
| | 1943-1974 | | | | | | | | | | | | |
| Max | 1249 | 1426 | 1343 | 1368 | 1193 | 910 | 839 | 634 | 428 | 429 | 689 | 894 | 713 |
| Min | 127 | 252 | 325 | 395 | 390 | 287 | 209 | 152 | 130 | 112 | 112 | 140 | 284 |
| | 530 | 635 | 764 | 790 | 661 | 498 | 389 | 265 | 224 | 231 | 282 | 391 | 471 |
| S.D. | 270 | 266 | 251 | 231 | 208 | 184 | 147 | 86 | 79 | 84 | 125 | 205 | 102 |
| | | | | | | | | | | | | | |
| | | | | | | 1975-1 | 1998 | | | | | | |
| Max | 1090 | 1007 | 1357 | 1333 | 1396 | 924 | 853 | 866 | 608 | 666 | 723 | 886 | 733 |
| Min | 145 | 215 | 379 | 453 | 262 | 130 | 120 | 116 | 134 | 136 | 190 | 229 | 301 |
| Mean | 537 | 601 | 800 | 779 | 684 | 536 | 411 | 320 | 282 | 301 | 383 | 531 | 513 |
| S.D. | 193 | 201 | 248 | 257 | 299 | 217 | 145 | 141 | 108 | 122 | 138 | 208 | 105 |

Table 9. Summary statistics for selected water quality constituents

| stat | inst_dchrg | org_nitro | dis_ammon | tot_ammon | dis_no3 | no3no2 | tphos | dphos | ophos | tot_res | nf_res | to_carb | do_carb | sus_sedi | dis_iron |
|-----------|----------------|--------------|-----------|-----------|---------|---------|--------|---------|-----------|---------|---------|---------|---------|----------|----------|
| | | | | | | | | | | | | | | | |
| Surface \ | Water Only - N | lo Mississip | pi River | | | | | | | | | | | | |
| Mean | 1347.2195 | 0.413778 | 0.066286 | 0.49197 | 0.02586 | 0.60607 | 0.2066 | 0.06557 | 0.0662979 | 247.27 | 31.8421 | 2.11304 | 3.9844 | 143.167 | 78.138 |
| Std Dev | 2361.5278 | 0.277589 | 0.086642 | 0.50753 | 0.02516 | 0.767 | 0.1311 | 0.0371 | 0.0333583 | 268.72 | 27.8314 | 1.72969 | 1.6105 | 101.752 | 105.5 |
| Std Err | 260.78712 | 0.041381 | 0.014645 | 0.06498 | 0.00425 | 0.09985 | 0.0189 | 0.00541 | 0.0048658 | 37.629 | 6.38495 | 0.25503 | 0.2401 | 16.9587 | 14.631 |
| 95 % CI | 518.89434 | 0.083399 | 0.029763 | 0.12999 | 0.00864 | 0.19988 | 0.0381 | 0.01089 | 0.0097946 | 75.581 | 13.4146 | 0.51366 | 0.4838 | 34.4286 | 29.373 |
| 99 % CI | 687.97709 | 0.111416 | 0.039961 | 0.17288 | 0.01161 | 0.26596 | 0.0508 | 0.01454 | 0.0130754 | 100.77 | 18.3802 | 0.68597 | 0.6464 | 46.1954 | 39.151 |
| n | 82 | 45 | 35 | 61 | 35 | 61 | 48 | 47 | 47 | 51 | 19 | 46 | 45 | 36 | 52 |
| Min | 71 | 0.2 | 0.015 | 0.01 | 0.01 | 0.01 | 0.05 | 0.01 | 0.01 | 41 | 2 | 0.2 | 0.7 | 45 | 3 |
| Max | 14000 | 1.6 | 0.469 | 2.5 | 0.101 | 3.16 | 0.64 | 0.16 | 0.16 | 1990 | 78 | 7.6 | 7.6 | 451 | 470 |
| | | | | | | | | | | | | | | | |
| Mississip | pi River at Hi | ckman, KY | | | | | | | | | | | | | |
| Mean | | | 0.121111 | 0.03 | | | 0.144 | | | 451.4 | 192 | | | | |
| Std Dev | | | 0.159173 | 0 | | | 0.1385 | | | 177.71 | 173.031 | | | | |
| Std Err | | | 0.053058 | 0 | | | 0.0438 | | | 56.196 | 54.717 | | | | |
| 95 % CI | | | 0.122354 | | | | 0.0991 | | | 127.13 | 123.781 | | | | |
| 99 % CI | | | 0.178046 | | | | 0.1423 | | | 182.64 | 177.838 | | | | |
| n | | | 9 | 1 | | | 10 | | | 10 | 10 | | | | |
| Min | | | 0.01 | 0.03 | | | 0.03 | | | 218 | 26 | | | | |
| Max | | | 0.48 | 0.03 | | | 0.49 | | | 740 | 512 | | | | |

Table 10. Surface water quality data summary*

| | | | | Try data | | -) | 1 | 1 | | | |
|-------|------|--------|--------|----------|-------------------|------|------|------|------|------|-------|
| Stat | Org | D. | T. | D. | NO ₃ / | | | | T. | NF. | Sus. |
| | N | NH_3 | NH_3 | NO_3 | NO_2 | TP | DOC | TOC | Res | Res | Solid |
| Head | | | | | | | | | | | |
| water | | | | | | | | | | | |
| Mean | 0.41 | 0.07 | 0.49 | 0.03 | 0.61 | 0.21 | 3.98 | 2.11 | 247 | 32 | 143 |
| Min | 0.2 | 0.02 | 0.01 | 0.01 | 0.01 | 0.05 | 0.7 | 0.2 | 41 | 2 | 45 |
| Max | 1.6 | 0.47 | 2.5 | 0.10 | 3.16 | 0.64 | 7.6 | 7.6 | 1990 | 78 | 451 |
| N | 45 | 35 | 61 | 35 | 61 | 48 | 45 | 46 | 51 | 19 | 36 |
| Std. | 0.28 | 0.16 | 0.51 | 0.03 | 0.77 | 0.13 | 1.73 | 1.72 | 269 | 27.8 | 102 |
| Dev. | | | | | | | | | | | |
| | | | | | | | | | | | |
| Miss. | | | | | | | | | | | |
| River | | | | | | | | | | | |
| Mean | 0.12 | 0.03 | | | | 0.14 | | | 451 | 192 | |
| Min | 0.01 | 0.03 | | | | 0.03 | | | 218 | 26 | |
| Max | 0.48 | 0.03 | | | | 0.49 | | | 740 | 512 | |
| N | 9 | 1 | | | | 10 | | | 10 | 10 | |
| Std. | 0.16 | 0 | | | | 0.14 | | | 178 | 173 | |
| Dev. | | | | | | | | | | | |

^{*} Concentrations are in mg/L.

Org N = Organic nitrogen

 $DNH_3 = Dissolved ammonia$

 $TNH_3 = Total ammonia$

DNO₃ =Dissolved nitrate

 $NO_3/NO_2 = Nitrate/nitrite nitrogen$

TP = Total phosphorus

DOC = Dissolved organic carbon TOC = Total organic carbon

T. Res = Total residue

NF. Res = Nonfilterable residue

Sus. Solid = Suspended solids

Table 11. Recommended initial water quality concentrations

| Water Source | Nitrogen | Phosphorus | Organic Carbon | Suspended Solids |
|--------------|----------|------------|----------------|------------------|
| | mg/L | mg/L | mg/L | mg/L |
| Headwater | 1.5 | 0.21 | 4 | 150 |
| Combined | 1.2 | 0.15 | 4 | 260 |

Table 12. Watershed Function expressed as % Net Removal – New Madrid Floodway

| Scenarios | N | N | N | P | P | P | OC | OC | OC | Seds | Seds | Seds |
|-----------|------|------|-----|------|------|-----|------|------|-----|------|------|------|
| | E* | H* | L* | Е | Н | L | Е | Н | L | Е | Н | L |
| 1 | 49.0 | 86.4 | 8.6 | 27.8 | 86.8 | 9.2 | 16.5 | 87.3 | 9.8 | 55.8 | 87.3 | 9.8 |
| 2 | 23.7 | 83.6 | 7.5 | 16.3 | 84.1 | 8.5 | 13.2 | 84.8 | 9.7 | 33.3 | 85.1 | 9.7 |
| 3 | 39.2 | 85.8 | 8.5 | 23.3 | 86.2 | 9.1 | 15.8 | 86.7 | 9.8 | 47.8 | 86.9 | 9.9 |
| 4 | 12.3 | 82.0 | 6.9 | 10.4 | 82.3 | 7.8 | 10.8 | 82.9 | 9.6 | 17.5 | 82.9 | 9.8 |
| 5 | 12.5 | 81.9 | 4.5 | 10.2 | 82.4 | 5.8 | 11.1 | 83.7 | 8.6 | 24.6 | 83.8 | 9.0 |

Table 13. Watershed Function expressed as % Net Removal – St. Johns Bayou

| Scenarios | N | N | N | P | P | P | OC | OC | OC | Seds | Seds | Seds |
|-----------|------|------|-----|------|------|-----|------|------|-----|------|------|------|
| | Е | Н | L | Е | Н | L | Е | Н | L | Е | Н | L |
| 1 | 47.6 | 86.6 | 8.9 | 28.6 | 86.9 | 9.4 | 11.9 | 87.3 | 9.8 | 45.8 | 87.3 | 9.8 |
| 2 | 26.9 | 83.9 | 7.4 | 18.1 | 84.4 | 8.4 | 10.9 | 85.1 | 9.7 | 35.7 | 85.3 | 9.7 |
| 3 | 41.9 | 85.9 | 9.0 | 24.8 | 86.1 | 9.4 | 17.3 | 86.5 | 9.9 | 44.6 | 86.5 | 9.9 |
| 4 | 11.8 | 81.9 | 6.5 | 10.1 | 82.1 | 7.4 | 14.5 | 82.8 | 9.6 | 17.4 | 82.9 | 9.8 |
| 5 | 17.5 | 82.5 | 5.1 | 12.9 | 83.0 | 6.3 | 22.2 | 84.1 | 8.5 | 29.0 | 84.2 | 8.7 |

^{*} E is the expected value for the watershed function
* H is the high retention value for the watershed function
* L is the low retention value for the watershed function

Table 14. Potential impacts on nutrient and sediment loading interactions between the Mississippi River and the study area with the project

| for 5 days | \\al\ \(\al\\tau | Comp. (m. m/l.) | Truncata d | Not Detained (kg) | Immed on Mice. Diver |
|--|--|-----------------------------------|--|---|--------------------------------------|
| Basin / Constituent | Volume (acre-ft) | Conc (mg/L) | Expected Retention | Net Retained (kg) | Impact on Miss. River (% Decrease) |
| Nitrogen | | | | | |
| Miss. River | 7,933,844 | 1.2 | 1 | 11744810.75 | |
| New Madrid Floodway | 45,305 | 1.5 | 0.125 | 10479.2096 | 0.09 |
| St. Johns Bayou | 34,372 | 1.5 | 0.175 | 11130.51427 | 0.09 |
| Phosphorus | | | | | |
| Miss. River | 7,933,844 | 0.2 | 1 | 1957468.458 | |
| New Madrid Floodway | 45,305 | 0.15 | 0.102 | 855.1035032 | 0.04 |
| St. Johns Bayou | 34,372 | 0.15 | 0.129 | 820.4779094 | 0.04 |
| Organic Carbon | | | | | |
| Miss. River | 7,933,844 | 4 | 1 | 39149369.15 | |
| New Madrid Floodway | 45,305 | 4 | 0.111 | 24814.76833 | 0.06 |
| St. Johns Bayou | 34,372 | 4 | 0.222 | 37652.93972 | 0.10 |
| Sediments | | | | | |
| Miss. River | 7,933,844 | 260 | 1 | 2544708995 | |
| New Madrid Floodway | 45,305 | 150 | 0.246 | 2062308.449 | 0.08 |
| St. Johns Bayou | 34,372 | 150 | 0.29 | 1844485.223 | 0.07 |
| Miss. River of 700 K (cfs Basin / Constituent | Volume (acre-ft) | Conc (mg/L) | Expected Retention | Net Retained (kg) | Impact on Miss. River (% Decrease) |
| Nitrogram | | | recention | | (70 Decircuse) |
| Nitrogen | E 455 000 | 4.2 | 1 | 0075074 000 | |
| Miss. River | 5,455,000 | 1.2 | | 8075271.283 | 0.00 |
| New Madrid Floodway | 2190 | _ | | 1588.556116 | 0.02 |
| St. Johns Bayou | 3080 | 1.5 | 0.419 | 2388.015375 | 0.03 |
| Phosphorus Miss. River | 5,455,000 | 0.2 | 1 | 1345878.547 | |
| | 1 | 0.2 | 1 | | |
| New Madrid Floodway | | 0.45 | 0.000 | 04 40400000 | 0.01 |
| Ct. Jahra Davisii | 2190 | 0.15 | | | |
| St. Johns Bayou | 3080 | | | | |
| Organic Carbon | 3080 | 0.15 | 0.248 | 141.3431535 | |
| Organic Carbon Miss. River | 3080 5,455,000 | 0.15 | 0.248 | 141.3431535 26917570.94 | 0.01 |
| Organic Carbon Miss. River New Madrid Floodway | 5,455,000 2190 | 0.15 4 4 | 0.248 1 0.158 | 141.3431535 26917570.94 1707.427662 | 0.01 |
| Organic Carbon Miss. River New Madrid Floodway St. Johns Bayou | 3080 5,455,000 | 0.15 4 4 | 0.248 1 0.158 | 141.3431535 26917570.94 1707.427662 | 0.01 |
| Organic Carbon Miss. River New Madrid Floodway St. Johns Bayou Sediments | 5,455,000 2190 3080 | 0.15 4 4 4 | 0.248 1 0.158 0.173 | 141.3431535 26917570.94 1707.427662 2629.286618 | 0.01 |
| Organic Carbon Miss. River New Madrid Floodway St. Johns Bayou Sediments Miss. River | 3080 5,455,000 2190 3080 5,455,000 | 0.15 4 4 4 260 | 0.248 1 0.158 0.173 | 141.3431535 26917570.94 1707.427662 2629.286618 1749642111 | 0.01 0.01 0.01 |
| Organic Carbon Miss. River New Madrid Floodway St. Johns Bayou | 5,455,000 2190 3080 | 0.15 4 4 4 260 150 | 0.248 1 0.158 0.173 1 0.478 | 141.3431535 26917570.94 1707.427662 2629.286618 1749642111 193706.5876 | 0.01 0.01 0.01 0.01 0.01 |

Table 15. Human-health criteria for pesticides in drinking water

| Human-Health Criteria | | | | | | | | |
|----------------------------|-----------------|---------------|-------------------|------------------------------|--|--|--|--|
| Compound | Type (2) | μg/L | Type of Criterion | Reference | | | | |
| | | AMIDES | | | | | | |
| 2, 6-Diethylaniline | DP (alachlor) | - | | | | | | |
| Acetochlor | Н | | | | | | | |
| Alachlor | H | 2 | MCL | USEPA (1999) | | | | |
| Metolachlor | H | 70 | HA-L | USEPA (1999) | | | | |
| Napropamide | H | | | | | | | |
| Pronamide | Н | 50 | HA-L | USEPA (1999) | | | | |
| Propachlor | H | 90 | HA-L | USEPA (1999) | | | | |
| Propanil | П | CARBAMATE | :Q | | | | | |
| 3-Hydroxycarbofuran | DP (carbofuran) | CARDAMATE | | | | | | |
| Aldicarb | I (Carbolulail) | 7 | draft MCL (3) | USEPA (1999) | | | | |
| Aldicarb sulfone | DP (aldicarb) | 7 | draft MCL (3) | USEPA (1999) | | | | |
| Aldicarb sulfoxide | DP (aldicarb) | 7 | draft MCL (3) | USEPA (1999) | | | | |
| Butylate | H (aidicaib) | 350 | HA-L | USEPA (1999) | | | | |
| Carbaryl | 1 | 700 | HA-L | USEPA (1999) | | | | |
| Carbofuran | <u>'</u> | 40 | MCL | USEPA (1999) | | | | |
| EPTC | H | | | | | | | |
| Methiocarb | 1 | | | | | | | |
| Methomyl | · | 200 | HA-L | USEPA (1999) | | | | |
| Molinate | Н | | | | | | | |
| Oxamyl | 1 | 200 | MCL | USEPA (1999) | | | | |
| Pebulate | Н | | | | | | | |
| Propham | H | 100 | HA-L | USEPA (1999) | | | | |
| Propoxur | i i | | | | | | | |
| Thiobencarb | H | | | | | | | |
| Triallate | H | | | | | | | |
| | 1 | CHLOROPHENOXY | | l | | | | |
| 2,4,5-T | Н | 70 | HA-L | USEPA (1999) | | | | |
| 2,4,5-TP (silvex) | Н | 50 | MCL | USEPA (1999) | | | | |
| 2,4-D | Н | 70 | MCL | USEPA (1999) | | | | |
| 2,4-DB | Н | | | | | | | |
| Dichlorprop | Н | | | | | | | |
| MCPA | Н | 10 | HA-L | USEPA (1999) | | | | |
| MCPB | Н | | | | | | | |
| | | INITROANILIN | IES | | | | | |
| Benfluralin | Н | | | | | | | |
| Ethalfluralin | Н | | | | | | | |
| Oryzalin | Н | | | | | | | |
| Pendimethalin | Н | | | | | | | |
| Trifluralin | Н | 5 | HA-L | USEPA (1999) | | | | |
| | 1 | ORGANOCHLOF | | _ | | | | |
| Chlorothalonil | F | 15 | RSD (10-5) | USEPA (1999) | | | | |
| Dacthal (DCPA) | H | | | | | | | |
| Dacthal, mono acid | H | | | | | | | |
| DDE, p,p' | DP (DDT) | 1 | RSD (10-5) | USEPA (1999) | | | | |
| Dichlobenil | H | | | | | | | |
| Dieldrin | 1 | 0.02 | RSD (10-5) | USEPA (1999) | | | | |
| HCH, alpha | DP (lindane) | 0.06 | RSD (10-5) | USEPA (1999) | | | | |
| HCH, gamma (lindane) | 1 | 0.2 | MCL | USEPA (1999) | | | | |
| A minumb no una etterrit | 1 | ORGANOPHOSPI | | | | | | |
| Azinphos-methyl | | | | (4000) | | | | |
| Chlorpyrifos | 1 | 20 | HA-L | USEPA (1999) | | | | |
| Diazinon | 1 | 0.6 | HA-L | USEPA (1999) USEPA (1999) | | | | |
| Disulfoton | 1 | 0.3 | HA-L | (/ | | | | |
| Ethoprop | 1 | 10 | | LICEDA (1000) | | | | |
| Fonofos | 1 | | HA-L | USEPA (1999) | | | | |
| Malathion Mothyl parethion | 1 | 200 | HA-L | USEPA (1999) | | | | |
| Methyl parathion | 1 | 2 | HA-L | USEPA (1999) | | | | |
| Parathion | 1 | | | | | | | |
| Phorate Terbufos | 1 | 0.9 | HA-L | USEPA (1999) | | | | |
| 16100109 | 1 | U.8 | I I/A-L | (Continued) | | | | |
| | | | | (Continued) | | | | |

Table 15. (Concluded)

| | | Hu | | | |
|-------------------|---------------|--------------|-------------------|--------------|--|
| Compound | Type (2) | μg/L | Type of Criterion | Reference | |
| • | | PYRETHRO | IDS | • | |
| Permethrin, cis | 1 | | | | |
| | | TRIAZINE | S | | |
| Atrazine | Н | 3 | MCL | USEPA (1999) | |
| Atrazine, deethyl | DP (atrazine) | | | | |
| Cyanazine | H | 1 | HA-L | USEPA (1999) | |
| Metribuzin | Н | 100 | HA-L | USEPA (1999) | |
| Prometon | Н | 100 | HA-L (4) | USEPA (1999) | |
| Simazine | Н | 4 | MCL | USEPA (1999) | |
| | | URACILS | , | . , , | |
| Bromacil | Н | 90 | HA-L | USEPA (1999) | |
| Terbacil | Н | 90 | HA-L | USEPA (1999) | |
| | | UREAS | • | | |
| Diuron | Н | 10 | HA-L | USEPA (1999) | |
| Fenuron | Н | | | | |
| Fluometuron | Н | 90 | HA-L | USEPA (1999) | |
| Linuron | Н | | | | |
| Neburon | Н | | | | |
| Tebuthiuron | Н | 500 | HA-L | USEPA (1999) | |
| | | MISCELLANEOU | | | |
| Acifluorfen | Н | 10 | RSD (10-5) | USEPA (1999) | |
| Bromoxynil | Н | | | | |
| Chloramben | Н | 100 | HA-L | USEPA (1999) | |
| Clopyralid | Н | | | | |
| Dicamba | Н | 200 | HA-L | USEPA (1999) | |
| Dinoseb | Н | 7 | MCL | USEPA (1999) | |
| DNOC | Н | | | | |
| Picloram | H | 500 | MCL | USEPA (1999) | |
| Propargite | 1 | | | | |
| Triclopyr | H | | | | |
| | | MISCELLANE | ous | | |
| Bentazon | Н | 200 | HA-L | USEPA (1999) | |
| Norflurazon | H | | | | |

- Common chemical names.
 H = herbicide; I = insecticide; F = fungicide; DP = degradation product, with parent compound in parantheses.
 Value applies to sum of aldicarb, aldicarb sulfoxide, and aldicarb sulfone.
 Value is under review.

Note:

RSD (10-5), risk-specific dose at a cancer risk level of 1 in 100,000; HA-L Lifetime Health Advisory; MCL, maximum contaminant level.

Table 16. Pesticides in Surface Waters (NAQWA sites)

| Date | Metolachlor | Alachlor | Benfluralin | Triallate | Propanil | Thiobencarb | Pendimethalin | Napropamide |
|------------|---------------|----------|-------------|-----------|---------------|---------------|---------------|---------------|
| | μ g /L | μg/L | μg/L | μg/L | μ g /L | μ g /L | μ g /L | μ g /L |
| 04-04 1996 | | | | | | | | |
| 05-21 1996 | | | | 0.0010E | | | | |
| 06-19 1996 | | | | 0.001 | 0.260E | | | |
| 01-14 1997 | | 0.002 | | | | | | |
| 04-07 1997 | | | | | 0.0040E | 0.0020E | | |
| 04-25 1997 | | | | | 0.0040E | | | |
| 05-21 1997 | | | | 0.001 | | | | |
| 05-27 1997 | | | | 0.001 | | 0.0488E | | |
| 06-05 1997 | | | | | 0.0040E | | | |
| 06-10 1997 | | | | 0.001 | | | | |
| 06-16 1997 | | | | 0.001 | | | | |
| 06-23 1997 | | | | 0.001 | | 0.0296E | | |
| 06-30 1997 | | | 0.0020E | 0.001 | | | 0.0271 | |
| 07-14 1997 | 0.222 | | 0.0020E | | 0.0040E | 0.002 | | 0.003 |
| 07-30 1997 | | | | | | 0.0020E | | |
| 08-14 1997 | | | | | | 0.0020E | | |

E - Estimated

Table 17. Mass balance for selected water quality constituents at Big Oak Tree State Park

| Elevation (ft) / Constituent | Volume (acre-ft) | Headwater Concentration (mg/L) | Mass (kg) | Groundwater Concentration (mg/L) | Mass (kg) | Change in Mass | % Change |
|---------------------------------|---------------------|--------------------------------------|-----------|--|-----------|-------------------|----------|
| Nitrogen* (gw < sw) | | 1.5 | | 1.2 | | | -20 |
| 285 | 0 | | 0 | | 0 | 0 | |
| 287 | 21 | | 38.859 | | 31.0872 | 7.771801 | |
| 290 | 859 | | 1589.518 | | 1271.615 | 317.90367 | |
| 292 | 2364 | | 4374.414 | | 3499.531 | 874.88274 | |
| Nitroger (gw > sw | | | | | | | 16.66667 |
| 285 | 0 | 0.6 | 0 | 0.7 | 0 | | |
| 287 | 21 | | 15.5436 | | 18.1342 | -2.5906 | |
| 290 | 859 | | 635.8073 | | 741.7752 | -105.9679 | |
| 292 | 2364 | | 1749.765 | | 2041.393 | -291.6276 | |
| Phosphor (gw < sw | | 0.2 | | 0.15 | | | -25 |
| 285 | 0 | | 0 | | 0 | 0 | |
| 287 | 21 | | 5.181201 | | 3.8859 | 1.2953002 | |
| 290 | 859 | | 211.9358 | | 158.9518 | 52.983945 | |
| 292 | 2364 | | 583.2552 | | 437.4414 | 145.81379 | |
| Phosphor (gw > sw | | 0.2 | | 0.4 | | | (+) 100 |
| 285 | 0 | | 0 | | 0 | 0 | |
| 287 | 21 | | 5.181201 | | 10.3624 | 5.1812006 | |
| 290 | 859 | | 211.9358 | | 423.8716 | 211.93578 | |
| 292 | 2364 | | 583.2552 | | 1166.51 | 583.25516 | |
| Organic Car | rbon | 4 | | 2 | | | -50 |
| 285 | 0 | | 0 | | 0 | 0 | |
| 287 | 21 | | 103.624 | | 51.81201 | 51.812006 | |
| 290 | 859 | | 4238.716 | | 2119.358 | 2119.3578 | |
| 292 | 2364 | | 11665.1 | | 5832.552 | 5832.5516 | |
| Sediments | | 260 | | 2 | | | -99 |
| 285 | 0 | | 0 | | 0 | 0 | |
| 287 | 21 | | 6735.561 | | 51.81201 | 6683.7488 | |
| 290 | 859 | | 275516.5 | | 2119.358 | 273397.15 | |
| 292 | 2364 | | 758231.7 | | 5832.552 | 752399.15 | |

^{*} gw = groundwater; sw = surface water.

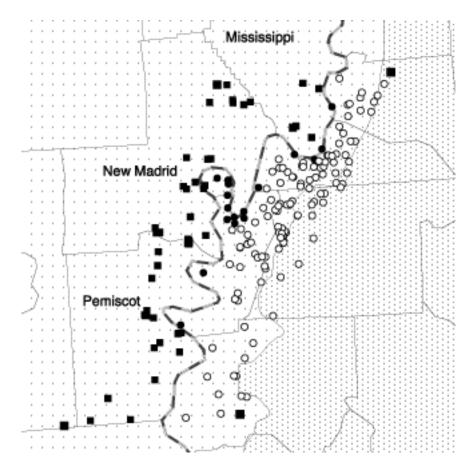


Figure 1. Stations for water quality data retrieved from STORET

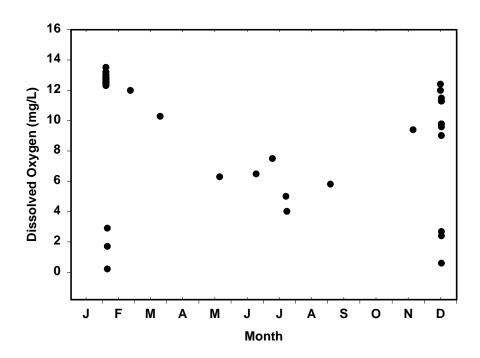


Figure 2. Dissolved oxygen concentrations.

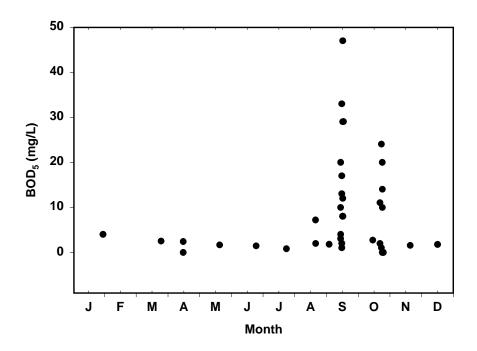


Figure 3. BOD_5 measurements.

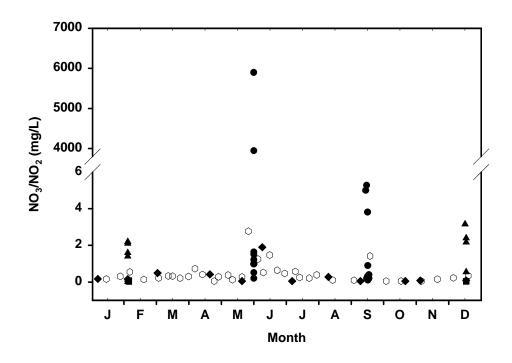


Figure 4. Nitrate/nitrite concentrations.

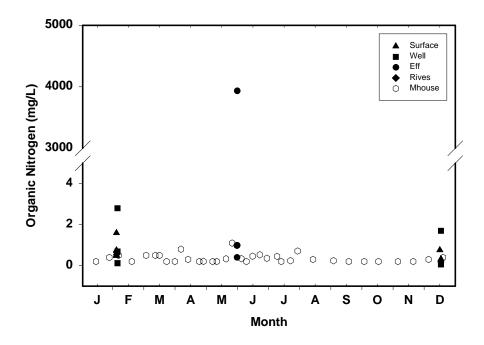


Figure 5. Organic nitrogen concentrations.

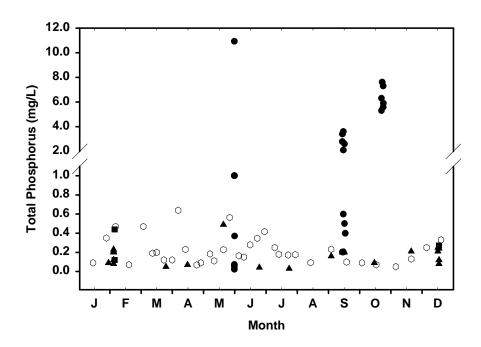


Figure 6. Total phosphorus concentrations.

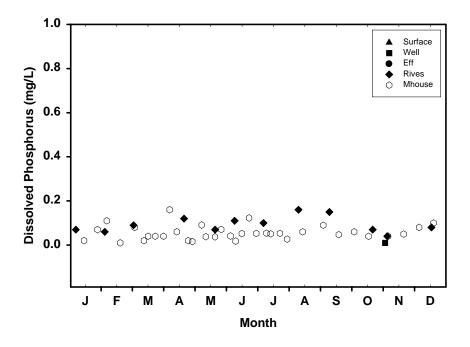


Figure 7. Dissolved phosphorus concentrations.

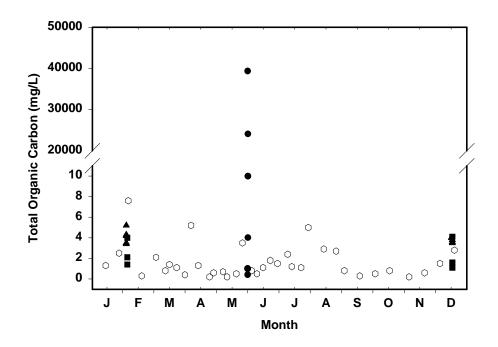


Figure 8. Total organic carbon concentrations.

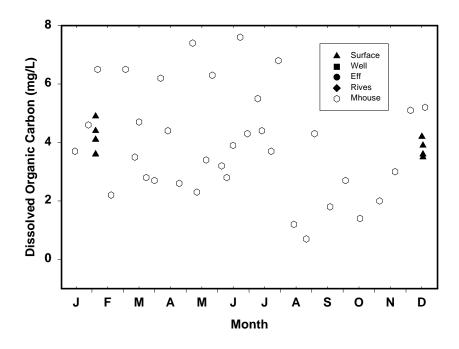


Figure 9. Dissolved organic carbon concentrations.

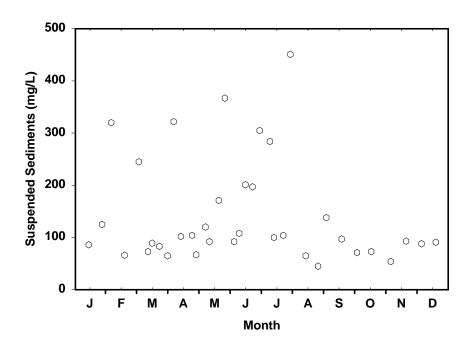


Figure 10. Suspended solids concentrations.

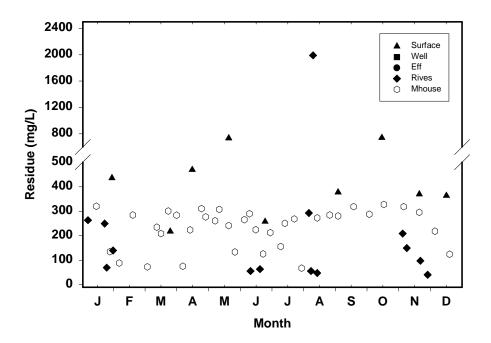


Figure 11. Residue concentrations.

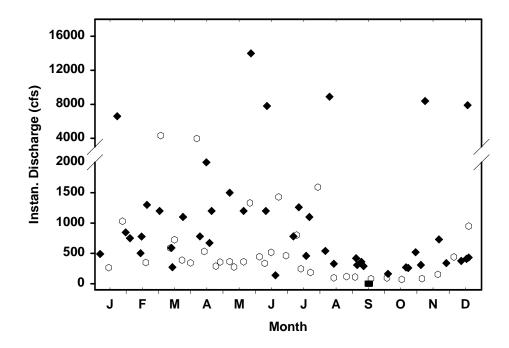


Figure 12. Instantaneous discharge measurements for Rives (♦) and Morehouse (○).

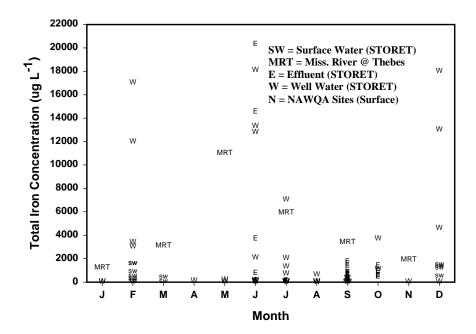


Figure 13. Total iron concentrations.

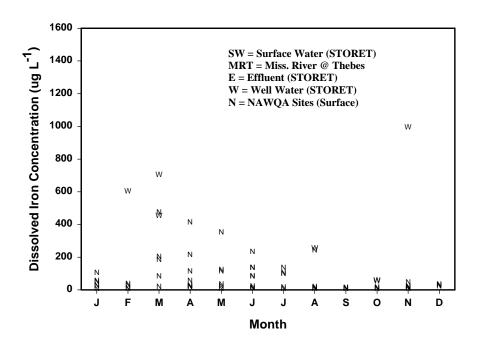


Figure 14. Dissolved iron concentrations.

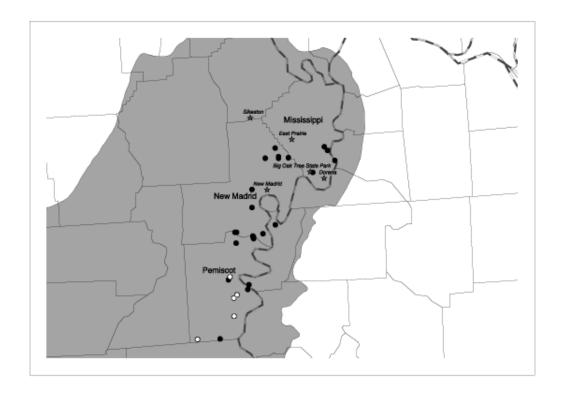


Figure 15. Distribution of iron concentrations in well water. Values greater than $3\ mg/L$ are depicted with open circles.

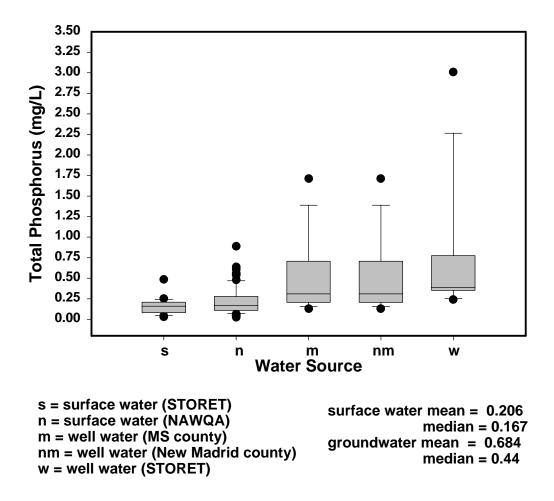


Figure 16. Distribution of total phosphorus concentrations by water source.

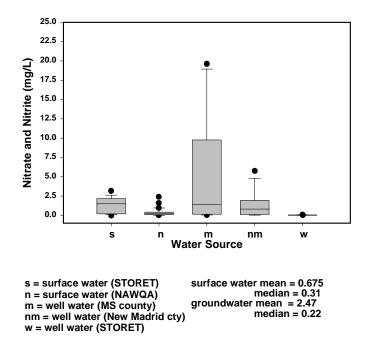


Figure 17. Distribution of nitrate and nitrite concentrations by water source.

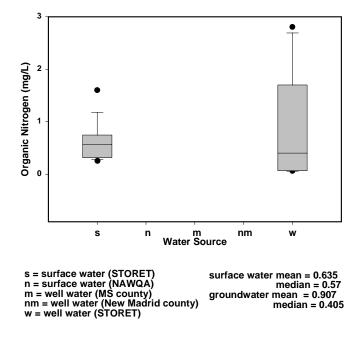


Figure 18. Distribution of organic nitrogen concentrations by water source.

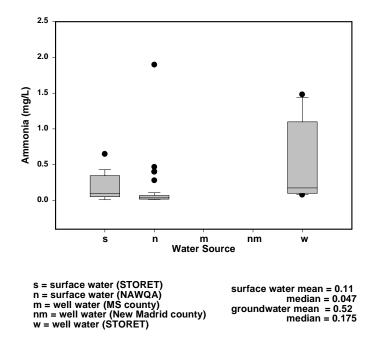


Figure 19. Distribution of ammonia concentrations by water source.

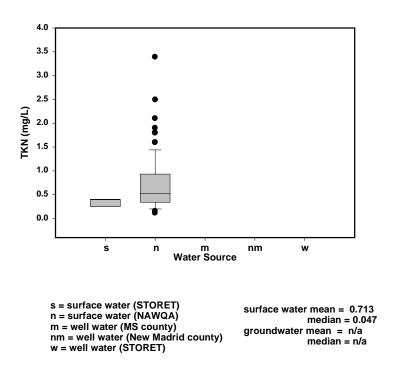


Figure 20. Distribution of total Kjeldahl nitrogen concentrations by water source.

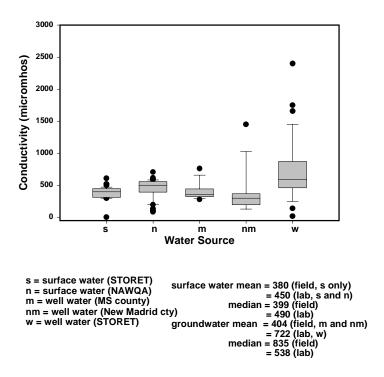


Figure 21. Distribution of conductivity values by water source.

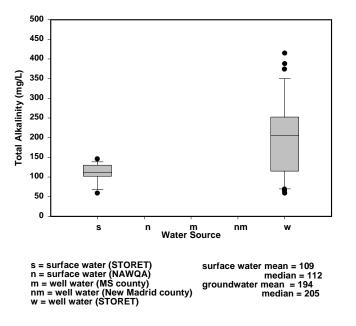


Figure 22. Distribution of total alkalinity values by water source.

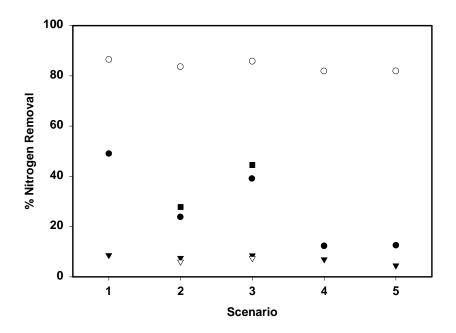


Figure 23. Nitrogen removal for the New Madrid Floodway.

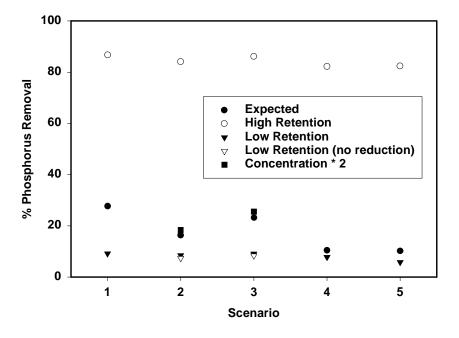


Figure 24. Phosphorus removal for the New Madrid Floodway.

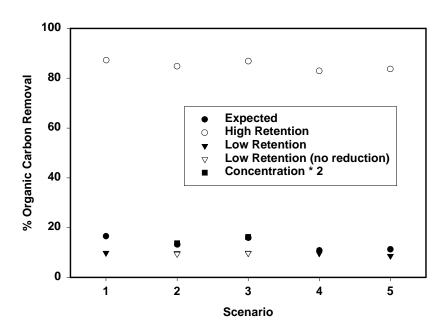


Figure 25. Organic carbon removal for the New Madrid Floodway.

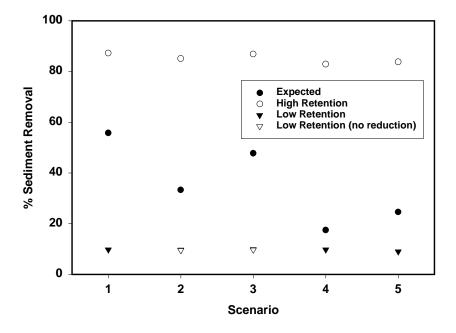


Figure 26. Sediment removal for the New Madrid Floodway.

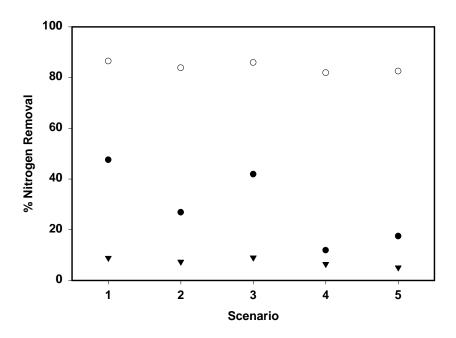


Figure 27. Nitrogen removal for St. Johns Bayou.

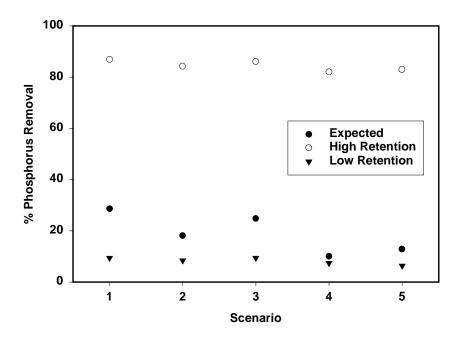


Figure 28. Phosphorus removal for St. Johns Bayou.

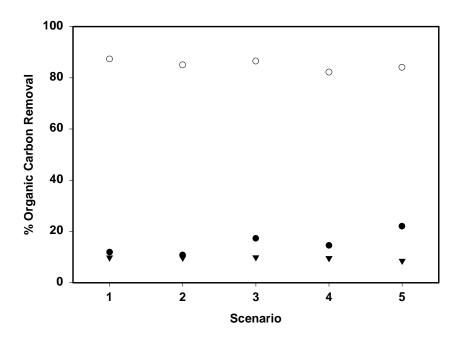


Figure 29. Organic carbon removal for St. Johns Bayou.

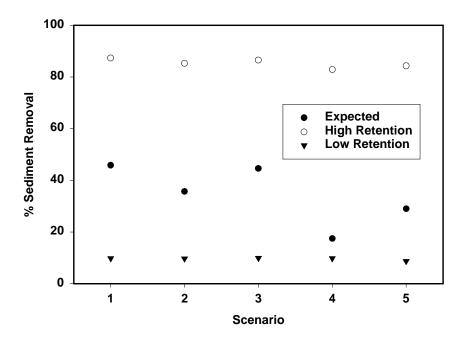


Figure 30. Sediment removal for St. Johns Bayou.

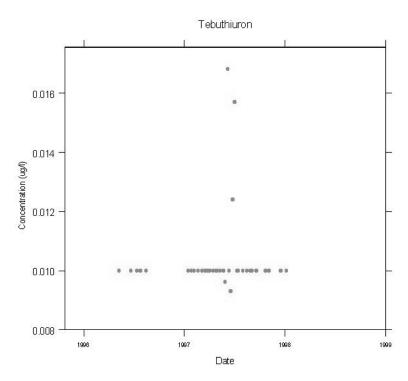


Figure 31. Distribution of Tebuthiuron.

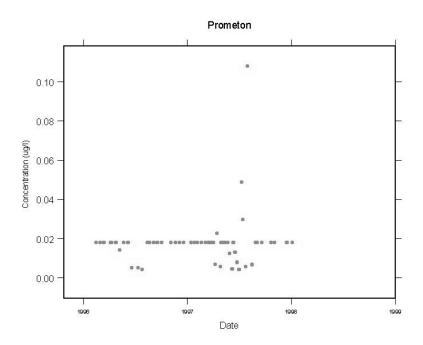


Figure 32. Distribution of Prometon.

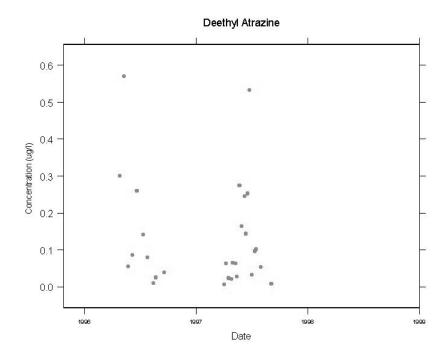


Figure 33. Distribution of Diethyl Atrazine.

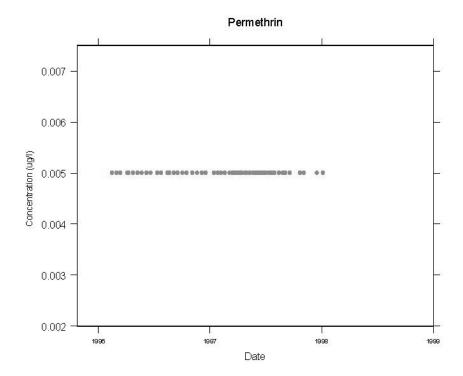


Figure 34. Distribution of Permethrin.

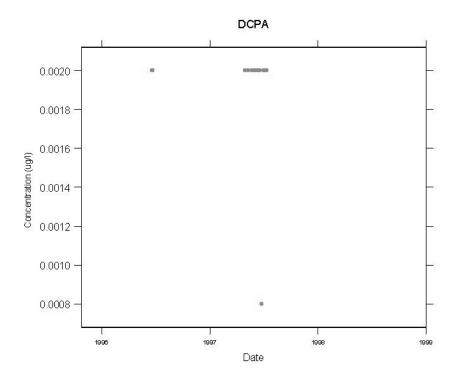


Figure 35. Distribution of DCPA.

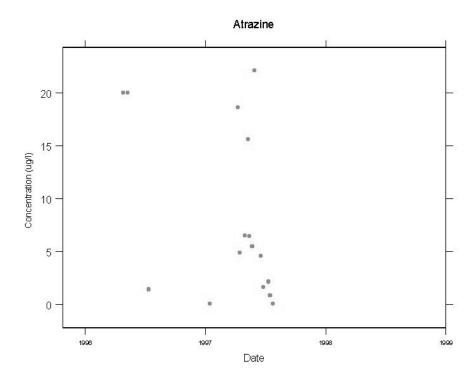


Figure 36. Distribution of Atrazine.

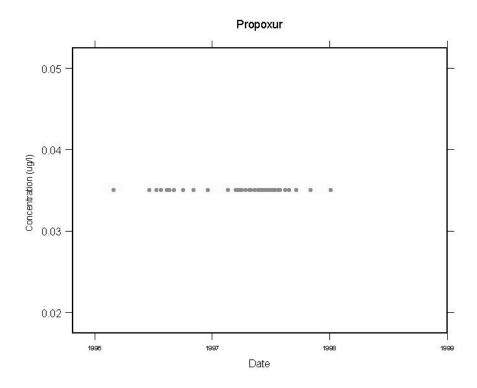


Figure 37. Distribution of Propoxur.

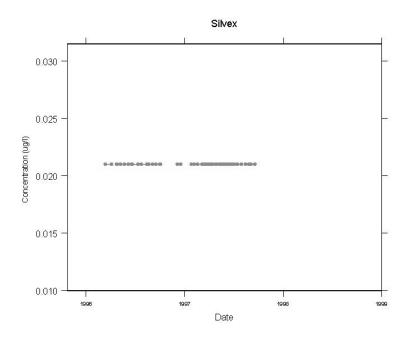


Figure 38. Distribution of Silvex.

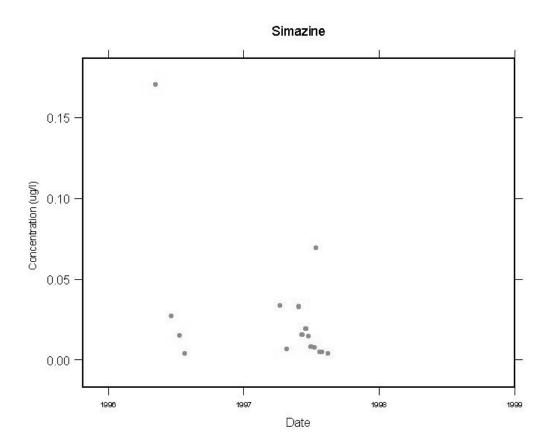


Figure 39. Distribution of Simazine.

APPENDIX A

Water Quality Data Sources Annotated Bibliography

Brahana, J.V., Mesko, T.O., Busby, J.F., and Kraemer, T.F. 1985. Ground-water quality data from the northern Mississippi embayment – Arkansas, Missouri, Kentucky, Tennessee, and Mississippi. USGS Open-file report 85-683.

Data were included in the STORET retrieval.

Brahana, J.V. and Mesko, T.O. 1987. Hydrogeology and preliminary assessment of regional flow in the upper Creataceous and adjacent aquifers in the northern Mississippi embayment. USGS Water-resources investigations report 87-4000.

Data were not applicable to the study except for supporting information on potential pesticide movement in the groundwater.

Heimann, D.C. and Femmer, S.R. 1998. Water quality, hydrology, and invertebrate communities of three remnant wetlands in Missouri, 1995-1997. USGS Water-resources investigations report 98-4190.

Data were not applicable to the study area.

Holmes, Jr., R. R. 1993. Sediment transport in the lower Missouri and the central Mississippi Rivers – June 26 through September 14, 1993, Floods in the Upper Mississippi River Basin, 1993. USGS Circular 1120-1.

Data were used in developing sediment concentrations and potential distribution and sedimentation patterns used for the Mississippi River.

Killpack, S.C. and Buchholz, D. 1993. Nitrogen in the environment: Nitrogen replacement value of legumes, University Extension, University of Missouri-Columbia, Water Quality Initiative publication WQ277.

Used in the discussion of nitrogen movement in agricultural and upland land covers.

Lory, J.A. 1999. Agricultural phosphorus and water quality, University of Missouri, Agricultural Publication, G9181.

Used in determining the potential for phosphorus movement.

Luckey, R.R. and Fuller, D.L. 1979. Hydrogeologic data for the Mississippi embayment of southeastern Missouri. USGS Open-file report 79-421.

Data were included in the STORET retrieval.

Luckey, R.R. and Fuller, D.L. 1984. Water resources of the southeast lowlands, Missouri. USGS Water-resources investigations report 84-4277.

Included data that were not included in the STORET retrieval.

MDNR. 1978. Memorandum – Results of water quality and compliance monitoring survey at Sikeston Municipal Wastewater Treatment Facility.

Included in discussion of point source data.

MDNR. 1978. Compliance Monitoring Report, Charleston Municipal Wastewater Treatment Facility, MO-0021776, May 16-May19, 1978.

Included in discussion of point source data.

MDNR. 1984. St. John's Ditch, Scott and New Madrid Counties, August 8 and 9, 1984.

Included in discussion of point source data.

MDNR. 1996. Stream survey of St. John's Ditch by John Ford, near the Sikeston Wastewater Treatment Plant.

Included in discussion of point source data.

Mesko, T.O. and Berkas, W.R. 1987. Missouri ground-water quality, USGS Open-file report 87-0735.

Was not applicable to the study.

Mesko, T.O. and Carlson, G.M. 1988. Occurrence of pesticides, nitrate, volatile organic compounds, and trace elements in ground water and streams, southeastern Missouri, 1986-1987. USGS Open-file report 88-495.

Data were included in the STORET retrieval.

Natural Resources Conservation Service, 1997-1999, Southeast Missouri Regional Water District, well-water reports.

Data were included in the discussion of groundwater quality.

Schardein, K. 1976. Water quality monitoring report, Sikeston, Missouri, MO-0035009, October 19-22, 1976. Missouri Department of Natural Resources.

Included in discussion of point source data.

Tracy, P.W. and Hefner, S.G. 1991. A survey of southeast Missouri irrigation. University Extension, University of Missouri-Columbia, WQ278.

Used as supporting information for assessing the potential for pesticide movement.

University of Missouri. 1996. Missouri soil fertility and fertilizers research update, 1995. Agronomy Miscellaneous Publication 96-03.

Used in assessing potential phosphorus movement.

University of Missouri. 1999. Missouri soil fertility and fertilizers research update, unpublished data.

Used in assessing potential phosphorus movement.

US EPA – STORET

Used to determine concentration distributions and mean values.

USGS – NAWQA studies in the boothill of MO. 1996-1999.

Used to supplement suggested concentration values and distributions described with data from the study area included in the STORET retrieval.

Pesticide Sources

MSEA Water Quality Projects, 1999. ATRAZINE, Extension Publications, University of Missouri, Columbia, MO.

Smith, M.B., Blanchard, P. E, Johnson, G. S., 1999. Atrazine Management and Water Quality, Manual 167, Extension Publications, University of Missouri-Columbia, Columbia, MO.

Smith, M.B., Prato, T. A., Blanchard, P.E., Kitchen, N.R., Lerch, R. N., Hjelmfelt, A. T., and Alberts, E. E., 1999. An Integrated Systems Approach to Watershed Management and Water Quality, Special Report 525, Extension Publications, , University of Missouri-Columbia, Columbia, MO.

Agricultural Drainage, Bulletin 871-98, Bulletin Extension, The Ohio State University, http://ohioline.ag.ohio-state.edu/b871/b871_32.html.

Skopec, M. P. and Hoyer, B. E., 1998. Pesticide Trends in Surface and Groundwater in Iowa: 1980 – 1995. Poster at the Sixth National Nonpoint-Source Monitoring Workshop, Cedar Rapids, Iowa, http://samuel.igsb.uiowa.edu/inforsch/iapest/pesticid.html

Johnson, B and Kending, A., 1999. Weed Control Guide for Missouri Field Crops, MP575, Outreach and Extension, University of Missouri-Columbia, Columbia, MO.

Hoffman D. J. and Keaster, A. J., 1999. Corn Soil Insects Research, Special Report 519, Agricultural Experiment Station, University of Missouri-Columbia, Columbia, MO.

Burkart, M.R., Gassman, P.W., Morman, T.B., and Singh, P., 1999. Estimating Atrazine Leaching in the Midwest, Journal of the American Water Resources Association, Vol. 35, No.5.

Squillace, P.J., Burkart, M.A., and Simpkins, W.W., 1997. Infiltration of Atrazine and Metabolites From A Stream to An Alluvial Aquifer, Journal of the American Water Resources Association, Vol. 33, No.1.

Holden, L.R., Graham, J.A., Whitmore, R.W., Alexander, W.J., Pratt, R.W., Liddle, S.K., and Piper, L.L., 1992. Results of the National Alachlor Well Water Survey, Environmental Science and Technology, Vol 26, No. 5.

Ostrofsky, E.B., Traina, S.J., Tuovinen, O.H., 1997. Variation in Atrazine Mineralization Rates in Relation to Agricultural Management Practice, Journal of Environmental Quality, 26:647-657.

Stolpe, N.B. and Shea, P.J., 1995. Alachlor and Atrazine Degradation in Nebraska Soil and Underlying Sediments, Soil Science, Vol.160, No.5.

Thurman, E.M., Goolsby, D.A., Meyer, M.T., Mills, M.S., Pomes, M.L., and Kolpin, D.W., 1992. A reconnaissance Study of Herbicides and Their Metabolites in Surface Water of the Midwestern United States Using Immunoassay and Gas Chromatography/Mass Spectrometry, Environmental Science and Technology, 26-2440-2447.

APPENDIX B Water Quality Data and Data Summaries

- Table B1. Database developed from the STORET retrieval.
- Table B2. Summary statistics for STORET retrieval.
- Table B3. Selected water quality data from USGS NAWQA studies at Rives and Morehouse, MO.
- Table B4. Selected pesticide data from USGS NAWQA studies at Rives and Morehouse, MO.
- Table B5. Selected water quality data from the Mississippi River at Thebes, IL.
- Table B6. Well-water data from the NRCS of Missouri.

| | | e developed from the STORET retrieval. | | | - | 5 | | | | \vdash | |
|-------|--------|--|-------------------------|--------|------|----------|------|---|----|----------|----|
| ation | | Station Description | Media | | Time | | 10 | | 11 | | 34 |
| | | BIG OAK LAKE SSE OF EAST PRAIRIE, MISSOURI. | /TYPA/AMBNT/FISH/LAKE | 910909 | | | | @ | - | @ | - |
| | | MISS R AT NEW MADRID MO | /TYPA/AMBNT/FISH/STREAM | 770928 | | | | @ | - | @ | - |
| | | MISSISSIPPI AT CARUTHERSVILLE, MISSOURI. | /TYPA/AMBNT/FISH/STREAM | 940913 | | | | @ | - | @ | - |
| | | MISSISSIPPI AT CARUTHERSVILLE, MISSOURI. | /TYPA/AMBNT/FISH/STREAM | 960910 | | | | @ | - | @ | - |
| | 2356 | NEW MADRID POWER PLANT | /TYPA/AMBNT/STREAM | 760915 | | | 37 | | - | @ | - |
| | 2356 | NEW MADRID POWER PLANT | /TYPA/AMBNT/STREAM | 760916 | 930 | - | 36 | | - | @ | - |
| | 2356 | NEW MADRID POWER PLANT | /TYPA/AMBNT/STREAM | 760917 | | | 37 | @ | - | @ | - |
| | 2356 | NEW MADRID POWER PLANT | /TYPA/AMBNT/STREAM | 760916 | 1030 | - | - | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760914 | 850 | - | - | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760915 | 850 | - | 24 | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760916 | 800 | - | 24.5 | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760915 | 730 | - | - | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760917 | 815 | - | 27.5 | @ | - | @ | - |
| | 2469 | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 760916 | 800 | - | - | @ | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 780725 | | | | @ | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 780726 | | | 31.5 | | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 780727 | | | 32 | | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 780727 | | | | @ | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 810916 | | | 24 | | _ | @ | _ |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 810917 | | | 21 | | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 920302 | | | | @ | | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 930303 | | | 18.6 | | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 930304 | | | 16.9 | | | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 930304 | | | | @ | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 930305 | | | 16.5 | | - | @ | - |
| | | PLASTENE SUPPLY-COOLING WATER | /TYPA/AMBNT/STREAM | 930304 | | | | @ | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | | | 0.983999 | 4.5 | | - | @ | - |
| | | | /TYPA/AMBNT/STREAM | | | | | @ | - | @ | - |
| | | HICKMAN COPRODUCTION | | 930203 | | 0.983999 | | | - | | |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | | 2.6 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | 4.92 | 2.6 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | 9.84 | 2.6 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | 16.4 | 2.6 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | 22.96 | 2.6 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 921216 | | - | | @ | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | 1.64 | 3.9 | | - | @ | - |
| | | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 921216 | | - | | @ | - | @ | - |
| | 210068 | HICKMAN COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | 1045 | 1.64 | 3.1 | | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 921217 | | 1.312 | 5.2 | | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 930203 | 1358 | 0.983999 | 4.9 | @ | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 930203 | 1400 | 4.92 | 4.9 | @ | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 930203 | 1402 | 9.84 | 4.9 | @ | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 930203 | 1403 | 16.4 | 4.9 | @ | - | @ | - |
| | 477504 | JOLLY LANDING | /TYPA/AMBNT/STREAM | 930203 | 1404 | 21.32 | 4.9 | @ | - | @ | - |
| | | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 1.312 | 6.4 | | - | @ | - |
| | | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 3.28 | 6.4 | | - | @ | - |
| | | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 6.56 | 6.4 | | - | @ | - |
| | | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 9.84 | 6.5 | | - | @ | - |

| Station | Station Description | Media | Sdate | Time I | Depth | 10 | | 11 | | 34 |
|-----------------|-----------------------------------|--------------------|--------|--------|----------|-----|---|----|---|-----|
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 921217 | 1121 | 11.808 | 6.5 | @ | - | @ | - @ |
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1306 | 0.983999 | 5.6 | @ | - | @ | - @ |
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 930203 | | 4.92 | 5 | | - | @ | - @ |
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1310 | 9.84 | 4.9 | @ | - | @ | - @ |
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1311 | 16.4 | 5 | @ | - | @ | - @ |
| 477505 | SLAB FILL CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1313 | 18.696 | 5 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | 1200 | 1.312 | 5.6 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | 1201 | 3.28 | 5.6 | @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 921217 | | 6.56 | 5.6 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 9.84 | 5.6 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 13.12 | 5.5 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | | 16.4 | 5.5 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | 1206 | 19.68 | 5.5 | | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 921217 | 1208 | 22.96 | 5.5 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | | | 0.983999 | 5 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 930203 | | 4.92 | 5 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1329 | 9.84 | 5 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1330 | 16.4 | 5 | @ | - | @ | - @ |
| 477506 | UPPER HEAD CHUTE | /TYPA/AMBNT/STREAM | 930203 | 1332 | 20.336 | 5 | @ | - | @ | - @ |
| | TIPTONVILLE COPRODUCTION | /TYPA/AMBNT/STREAM | 921217 | | - | - (| @ | - | @ | - @ |
| 477507 | TIPTONVILLE COPRODUCTION | /TYPA/AMBNT/STREAM | 930203 | | - | | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 690723 | 1445 | - | 30 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 690724 | 915 | - | 28 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 690903 | 920 | - | 27 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 690903 | 930 | - | - (| @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 691015 | 920 | - | 17 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 691120 | 1000 | - | 9 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 691120 | - | - | - (| @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 691216 | 1000 | - | 6 | | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 691216 | - | - | | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 700129 | 940 | - | - (| @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 700226 | 930 | - | 4.5 | @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 700326 | 940 | - | 8 | @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 700326 | | | 8 | | - | @ | - @ |
| 7024070 | | /TYPA/AMBNT/STREAM | 700416 | 950 | - | - (| @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 700416 | | - | | @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 700521 | 1000 | - | 23 | @ | - | @ | - @ |
| | | /TYPA/AMBNT/STREAM | 700521 | | - | - (| @ | - | @ | - @ |
| | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 700625 | | | 26 | | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 700625 | 1000 | - | - (| @ | - | @ | - @ |
| 7024070 | MISSISSIPPI RIVER AT HICKMAN, KY. | /TYPA/AMBNT/STREAM | 700710 | 1000 | - | 29 | @ | - | @ | - @ |
| 5600 | LOXCREEN IND WATER SUPPLY,HAYTI | /TYPA/AMBNT/WELL | 790821 | | - | | @ | - | @ | - @ |
| | LOXCREEN MUNI WATER SUPPLY,HAY\I | /TYPA/AMBNT/WELL | 790821 | 830 | - | - (| @ | - | @ | - @ |
| | | /TYPA/AMBNT/WELL | 690325 | - | - | - (| @ | - | @ | - @ |
| | T16N R11E 01DCB1 | /TYPA/AMBNT/WELL | 750107 | | - | 16 | | - | @ | - @ |
| | | /TYPA/AMBNT/WELL | 860617 | - | - | | @ | - | @ | - @ |
| | T16N R11E 04BAC1 | /TYPA/AMBNT/WELL | 641106 | | - | | @ | - | @ | - @ |
| 360526089440601 | T17N R12E 23CCB1 | /TYPA/AMBNT/WELL | 860617 | - | - | - (| @ | - | @ | - @ |

| 36084968435001 T18N R12E 258BB1 | Station | Station Description | Media | Sdate | Time [| Depth 10 |) | 11 | | 34 |
|--|-----------------|---|------------------|--------|--------|----------|------------|----|---|-----|
| 96049089435001 FEMSOTO PYSO TVELL 2 | 360949089435001 | T18N R12E 25BBB1 | /TYPA/AMBNT/WELL | 661117 | - | | @ | - | @ | - @ |
| 36103068425001 PEMISCOT PWSD 1 WELL 2 TYPAAMBNTWELL 821001 1200 | 360949089435001 | T18N R12E 25BBB1 | /TYPA/AMBNT/WELL | 750107 | 1200 | - 16 | @ | - | @ | - @ |
| \$613008932001 TENRISOT PWISD WELL 2 | 360949089435001 | T18N R12E 25BBB1 | /TYPA/AMBNT/WELL | 750702 | 1200 | | | - | | |
| 361130089394001 TIRR R13E 16GCD1 | | | /TYPA/AMBNT/WELL | 810928 | 1200 | | @ | - | @ | - @ |
| 196114009839203 T18N R13E 16CAD3 | 361030089425001 | PEMISCOT PWSD 1 WELL 2 | /TYPA/AMBNT/WELL | 821001 | 1200 | | @ | - | | - @ |
| 16114008939001 TISN RT15 EGCAD | 361130089394001 | T18N R13E 16BCC1 | /TYPA/AMBNT/WELL | 430304 | - | | @ | - | | |
| 161140069393101 TAB R 13E 16CAD | 361140089392903 | T18N R13E 16CAD3 | /TYPA/AMBNT/WELL | 550210 | 1200 | | @ | - | @ | - @ |
| 3614509945001 IAVTN 10.3-ARTESIAN WELL | 361140089393001 | T18N R13E 16CAC1 | /TYPA/AMBNT/WELL | 600428 | - | | @ | - | @ | - @ |
| 361415089450201 HAYTI NO 3-ARTESIAN WELL | 361140089393101 | T18N R13E 16CAD | /TYPA/AMBNT/WELL | | | | @ | - | @ | - @ |
| 361415089450201 HAYTI NO.3-ARTESIAN WELL | 361242089390401 | LK:A- 1 SPRIGGS | /TYPA/AMBNT/WELL | 560329 | - | - 15.6 | @ | - | @ | - @ |
| 1861415688450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 470218 | 1200 | | @ | - | @ | - @ |
| 1861415089450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 510514 | 1200 | | @ | - | @ | - @ |
| 161415089450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 510622 | 1200 | | @ | - | @ | - @ |
| 1861415089450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 540423 | 1200 | | @ | - | @ | - @ |
| S81415089450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 570927 | 1200 | - 35 | @ | - | @ | - @ |
| 18614150894450201 HAYTI NO.3-ARTESIAN WELL | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 831012 | 1000 | - 34 | 1 @ | - | @ | - @ |
| Sel1418089444501 TI9N R1ZE 34CAC1 | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 831014 | 1030 | - 34 | 1 @ | - | @ | - @ |
| 1561425089450701 TISN R12E 34CB | 361415089450201 | HAYTI NO.3-ARTESIAN WELL | /TYPA/AMBNT/WELL | 840802 | 800 | - 34.5 | @ | - | @ | - @ |
| 1561455089443301 T19N R12E 27DCB1 | 361418089444501 | T19N R12E 34CAC1 | /TYPA/AMBNT/WELL | 620605 | - | | @ | - | @ | - @ |
| 1561455089443301 T19N R12E 27DCB1 | 361425089450701 | T19N R12E 34CB | /TYPA/AMBNT/WELL | 710910 | - | | @ | - | @ | - @ |
| 361455089443301 T19N R12E 27DCB1 | 361455089443301 | T19N R12E 27DCB1 | /TYPA/AMBNT/WELL | 860618 | 1200 | | @ | - | @ | - @ |
| 361920089432801 T20N R12E 35DCD1 | 361455089443301 | T19N R12E 27DCB1 | /TYPA/AMBNT/WELL | 860618 | 1205 | | @ | - | @ | - @ |
| 36137089343201 LK:D- 1 JOE CHADWICK | 361455089443301 | T19N R12E 27DCB1 | /TYPA/AMBNT/WELL | 860618 | - | | @ | - | @ | - @ |
| 36137089343201 LK:D- 1 JOE CHADWICK | 361920089432801 | T20N R12E 35DCD1 | /TYPA/AMBNT/WELL | 860618 | - | | @ | - | @ | - @ |
| 362252089420201 T20N R13E 07CBC1 | 361937089343201 | LK:D- 1 JOE CHADWICK | /TYPA/AMBNT/WELL | | | - 16.1 | @ | - | @ | - @ |
| 362338089364401 T20N R13E 11AAB1 TYPA/AMBNT/WELL T50729 1200 - 16 | 362100089422001 | T20N R12E 24DDC1 | /TYPA/AMBNT/WELL | 550608 | - | | @ | - | @ | - @ |
| 362341089365701 T20N R13E 11ABB1 TYPA/AMBNT/WELL T50729 1200 - 17 | 362252089420201 | T20N R13E 07CBC1 | /TYPA/AMBNT/WELL | 860618 | - | | @ | - | @ | - @ |
| 362355089364801 T20N R13E 02DCA1 | 362338089364401 | T20N R13E 11AAB1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | @ | - | @ | - @ |
| 362356089364001 T20N R13E 02DDB1 T7YPA/AMBNT/WELL T50729 1200 - 16 | 362341089365701 | T20N R13E 11ABB1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 17 | ' @ | - | @ | - @ |
| 362406089365401 T20N R13E 02DBB1 TYPA/AMBNT/WELL T50729 1200 - 16 @ - @ - @ 362408089364301 T20N R13E 02DBA1 T7YPA/AMBNT/WELL T50729 1200 - 16 @ - @ - @ 362419089365201 T20N R13E 02DAA1 T7YPA/AMBNT/WELL T50729 1200 - 16 @ - @ - @ 362419089365201 T20N R13E 02DAA1 T7YPA/AMBNT/WELL T50729 1200 - 16 @ - @ - @ 362440089334801 T21N R14E 32DCC1 T7YPA/AMBNT/WELL T81109 1200 - 31 @ - @ - @ 362527089421101 T21N R14E 36AAA1 PORTAGEVILLE WELL NO.3 T7YPA/AMBNT/WELL T590930 1200 @ - @ - @ - @ @ 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 T7YPA/AMBNT/WELL T590930 @ - @ - @ - @ @ 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 T7YPA/AMBNT/WELL T590930 @ - @ - @ - @ @ & & & & & & & & | 362355089364801 | T20N R13E 02DCA1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | 6 @ | - | @ | - @ |
| 362408089364301 T20N R13E 02DBA1 | 362356089364001 | T20N R13E 02DDB1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | @ | - | @ | - @ |
| T20N R13E 02ACA1 | 362406089365401 | T20N R13E 02DBB1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | 6 @ | - | @ | - @ |
| 362440089334801 T21N R14E 32DCC1 | 362408089364301 | T20N R13E 02DBA1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | 6 @ | - | @ | - @ |
| 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 /TYPA/AMBNT/WELL 590930 1200 - - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ - @ | 362419089365201 | T20N R13E 02ACA1 | /TYPA/AMBNT/WELL | 750729 | 1200 | - 16 | @ | - | @ | - @ |
| 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 /TYPA/AMBNT/WELL 590930 @ - @ - @ - @ 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 /TYPA/AMBNT/WELL 750814 1200 - 16 @ - @ - @ 362528089414301 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 620821 1200 - 18 @ - @ - @ 362528089414301 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 621212 1200 @ - @ - @ 362530089414001 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 410701 @ - @ - @ 362530089414001 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 560329 16.7 @ - @ - @ 362718089361101 T21N R13E 13CDC1 /TYPA/AMBNT/WELL 560329 16.7 @ - @ - @ 362718089361101 T21N R13E 13CDC1 /TYPA/AMBNT/WELL 860618 @ - @ - @ 362955089293301 J. WHITSON /TYPA/AMBNT/WELL 660113 @ - @ - @ 36303089240901 K02C0004 /TYPA/AMBNT/WELL 660113 @ - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 @ - @ @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 @ - @ - @ 3620 - @ 362005 | 362440089334801 | T21N R14E 32DCC1 | /TYPA/AMBNT/WELL | 781109 | 1200 | - 3′ | @ | - | @ | - @ |
| 362527089421101 T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 /TYPA/AMBNT/WELL 750814 1200 - 16 @ - @ - @ 362528089414301 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 620821 1200 - 18 @ - @ - @ 362528089414301 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 621212 1200 - - @ - @ - @ 362530089414001 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 410701 - - @ - @ - @ 362530089414001 T21N R13E 30CDC1 /TYPA/AMBNT/WELL 410701 - - @ - @ - @ 362530089414001 T21N R13E 13CDC1 /TYPA/AMBNT/WELL 560329 - 16.7 @ - @ - @ 362718089361101 T21N R13E 13CDC1 /TYPA/AMBNT/WELL 860618 - - @ - @ - @ 362955089293301 J. WHITSON /TYPA/AMBNT/WELL 660113 - - - @ - @ 363039089240901 K02C0004 /TYPA/AMBNT/WELL 660113 - - - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 620822 1200 - - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 - - @ - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 - - @ & & & & & & & & | 362527089421101 | T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 | /TYPA/AMBNT/WELL | 590930 | 1200 | | @ | - | @ | - @ |
| 362528089414301 T21N R13E 30CDC1 | 362527089421101 | T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 | /TYPA/AMBNT/WELL | 590930 | - | | @ | - | @ | - @ |
| 362528089414301 T21N R13E 30CDC1 | 362527089421101 | T21N R12E 36AAA1 PORTAGEVILLE WELL NO.3 | /TYPA/AMBNT/WELL | 750814 | 1200 | - 16 | 6 @ | - | @ | - @ |
| 362528089414301 T21N R13E 30CDC1 | 362528089414301 | T21N R13E 30CDC1 | /TYPA/AMBNT/WELL | 620821 | 1200 | - 18 | 0 | - | @ | - @ |
| 362640089295301 LK:G- 7 W.F. TIPTON /TYPA/AMBNT/WELL 560329 16.7 @ - @ - @ 362718089361101 T21N R13E 13CDC1 /TYPA/AMBNT/WELL 860618 @ - @ - @ - @ 362955089293301 J. WHITSON /TYPA/AMBNT/WELL 660113 @ - @ - @ - @ 363039089240901 K02C0004 /TYPA/AMBNT/WELL 660113 @ - @ - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 620822 1200 @ - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 @ - @ - @ - @ | 362528089414301 | T21N R13E 30CDC1 | | 621212 | 1200 | | @ | - | @ | - @ |
| 362640089295301 LK:G- 7 W.F. TIPTON /TYPA/AMBNT/WELL 560329 - 16.7 @ - . @ - . @ - <td>362530089414001</td> <td>T21N R13E 30CDC1</td> <td>/TYPA/AMBNT/WELL</td> <td>410701</td> <td>-</td> <td></td> <td>@</td> <td>-</td> <td>@</td> <td>- @</td> | 362530089414001 | T21N R13E 30CDC1 | /TYPA/AMBNT/WELL | 410701 | - | | @ | - | @ | - @ |
| 362955089293301 J. WHITSON /TYPA/AMBNT/WELL 660113 - - @ - | 362640089295301 | LK:G- 7 W.F. TIPTON | | 560329 | - | - 16.7 | ' @ | - | @ | - @ |
| 362955089293301 J. WHITSON /TYPA/AMBNT/WELL 660113 - - @ - | 362718089361101 | T21N R13E 13CDC1 | /TYPA/AMBNT/WELL | 860618 | - | | @ | - | @ | - @ |
| 363039089240901 K02C0004 /TYPA/AMBNT/WELL 660113 - - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 620822 1200 - - @ - @ 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 - - @ - @ | | | | | | | | - | | |
| 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 620822 1200 @ - @ - @ - @ - @ - @ - @ - @ - @ | | | | | | | | - | _ | |
| 363107089363401 CITY OF MARSTON /TYPA/AMBNT/WELL 621005 1200 @ - @ - @ | | | | | | | | - | | |
| | | | | | | | | - | | |
| | | | | | | | | - | | |

| Station | Station Description | Media | Sdate | Time I | Depth | 10 | | 11 | | 34 |
|-----------------|---------------------------------|-------------------------------------|--------|--------|-------|------|---|----|---|-----|
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 630813 | 1200 | - | - | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 640723 | | | - | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 660225 | 1200 | - | - | @ | - | @ | - @ |
| | CITY OF MARSTON | /TYPA/AMBNT/WELL | 670714 | 1200 | - | - | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 690813 | 1200 | - | - | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 750814 | 1200 | - | 16 | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 831102 | 745 | - | 28.2 | @ | - | @ | - @ |
| 363107089363401 | CITY OF MARSTON | /TYPA/AMBNT/WELL | 840802 | 1100 | - | 24.7 | @ | - | @ | - @ |
| 363126089291501 | | /TYPA/AMBNT/WELL | 650420 | | - | | @ | - | @ | - @ |
| 363130089370001 | T22N R13E | /TYPA/AMBNT/WELL | 710723 | - | - | - | @ | - | @ | - @ |
| 363157089291701 | J. WHITSON | /TYPA/AMBNT/WELL | 650420 | - | - | - | @ | - | @ | - @ |
| 363200089350001 | T22N R14E 19 | /TYPA/AMBNT/WELL | 690516 | - | - | - | @ | - | @ | - @ |
| 363219089310701 | A. STEPP | /TYPA/AMBNT/WELL | 650419 | - | - | - | @ | - | @ | - @ |
| 363447089173401 | K02D0508 | /TYPA/AMBNT/WELL | 650420 | - | - | 15.6 | @ | - | @ | - @ |
| 363500089320001 | T23N R14E 34DCD1 | /TYPA/AMBNT/WELL | 660720 | - | - | | @ | - | @ | - @ |
| 363517089124501 | | /TYPA/AMBNT/WELL | 661115 | - | - | 13.9 | @ | - | @ | - @ |
| 363523089361001 | T23N R13E 35CAA1 | /TYPA/AMBNT/WELL | 520709 | 1200 | - | - | @ | - | @ | - @ |
| 363523089361001 | T23N R13E 35CAA1 | /TYPA/AMBNT/WELL | 620822 | 1200 | - | 19 | @ | - | @ | - @ |
| 363659089142801 | | /TYPA/AMBNT/WELL | 661115 | - | - | - | @ | - | @ | - @ |
| | T23N R16E 14ACB1 | /TYPA/AMBNT/WELL | 640930 | 1200 | - | 14 | @ | - | @ | - @ |
| 363827089172701 | T23N R16E 14ACB1 | /TYPA/AMBNT/WELL | 650823 | | - | | @ | - | @ | - @ |
| 363827089172701 | T23N R16E 14ACB1 | /TYPA/AMBNT/WELL | 750806 | 1200 | - | 7.4 | @ | - | @ | - @ |
| 363830089173501 | T23N R16E 14BDA | /TYPA/AMBNT/WELL | 640930 | - | - | - | @ | - | @ | - @ |
| 363840089170001 | T23N R16E 14AAA1 | /TYPA/AMBNT/WELL | 661117 | - | - | - | @ | - | @ | - @ |
| 364055089103201 | T24N R17E 35ADD1 | /TYPA/AMBNT/WELL | 860617 | - | - | - | @ | - | @ | - @ |
| 364222089243401 | T24N R15E 23CBC1 | /TYPA/AMBNT/WELL | 760727 | 1200 | - | 17 | @ | - | @ | - @ |
| 364224089273301 | T24N R15E 20CAC1 | /TYPA/AMBNT/WELL | 760727 | 1200 | - | 15 | @ | - | @ | - @ |
| 364240089313201 | T24N R14E 22ACA1 | /TYPA/AMBNT/WELL | 760727 | 1200 | - | 15 | @ | - | @ | - @ |
| 364247089273401 | T24N R15E 20BDB1 | /TYPA/AMBNT/WELL | 760727 | 1200 | - | 15 | @ | - | @ | - @ |
| 364331089123701 | T24N R17E 15BCC1 | /TYPA/AMBNT/WELL | 860617 | - | - | - | @ | - | @ | - @ |
| | T24N R17E 07ACC1 | /TYPA/AMBNT/WELL | 760527 | | | | @ | - | @ | - @ |
| 364453089282401 | T24N R15E 06CDD1 | /TYPA/AMBNT/WELL | 860618 | 1200 | - | - | @ | - | @ | - @ |
| 364453089282401 | T24N R15E 06CDD1 | /TYPA/AMBNT/WELL | 860618 | 1205 | - | - | @ | - | @ | - @ |
| 364453089282401 | T24N R15E 06CDD1 | /TYPA/AMBNT/WELL | 860618 | - | - | | @ | - | @ | - @ |
| W47371 | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 921217 | 1515 | - | 13.8 | @ | - | @ | - @ |
| W47371 | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 930204 | 835 | - | 12.7 | @ | - | @ | - @ |
| W47372 | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 921217 | | - | 8.2 | | - | @ | - @ |
| | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 930204 | 855 | - | 9.1 | @ | - | @ | - @ |
| W47373 | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 921217 | | | 15.6 | | - | @ | - @ |
| W47373 | COPRODUCTION SITE ASSESSMENT | /TYPA/AMBNT/WELL | 930204 | 950 | - | 15.7 | @ | - | @ | - @ |
| 2363 | NEW MADRID POWER PLANT | /TYPA/IND/NTRTMT/INTAKE/NONAMB/PIPE | 760915 | 910 | - | 23.5 | @ | - | @ | - @ |
| 2363 | NEW MADRID POWER PLANT | /TYPA/IND/NTRTMT/INTAKE/NONAMB/PIPE | 760916 | | - | 22.5 | | - | @ | - @ |
| 2363 | NEW MADRID POWER PLANT | /TYPA/IND/NTRTMT/INTAKE/NONAMB/PIPE | 760915 | 1100 | - | - | @ | - | @ | - @ |
| | - | /TYPA/IND/NTRTMT/INTAKE/NONAMB/PIPE | 760917 | | | 23 | _ | - | @ | - @ |
| | LOXCREEN IND SLUDGES,HAYTI MO. | /TYPA/IND/NTRTMT/OUTFL/NONAMB/PIPE | 790821 | | - | | @ | - | @ | - @ |
| | | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741023 | | - | 17 | _ | - | @ | - @ |
| | PLASTENE SETTLING POND EFFLUENT | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741022 | | - | | @ | - | @ | - @ |
| 989 | PLASTENE SETTLING POND EFFLUENT | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741024 | 650 | - | 19 | @ | - | @ | - @ |

| Station | Station Description | Media | Sdate Time Depth | 10 | 11 | 1 | 34 | ٦ |
|---------|-------------------------------------|------------------------------------|------------------|--------|----------|---|-----|---|
| | 989 PLASTENE SETTLING POND EFFLUENT | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741023 715 - | - @ | - | @ | | @ |
| | 989 PLASTENE SETTLING POND EFFLUENT | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741025 650 - | 19 @ | - | @ | | @ |
| | 989 PLASTENE SETTLING POND EFFLUENT | /TYPA/IND/PTRTMT/OUTFL/NONAMB/PIPE | 741024 650 - | - @ | - | @ | | @ |
| | 990 PLASTENE COMBINED EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 741023 635 - | 17 @ | - | @ | | @ |
| | 990 PLASTENE COMBINED EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 741022 730 - | - @ | - | @ | - (| @ |
| | 990 PLASTENE COMBINED EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 741024 630 - | 20 @ | - | @ | | @ |
| | 990 PLASTENE COMBINED EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 741025 630 - | 19 @ | - | @ | | @ |
| | 990 PLASTENE COMBINED EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 741024 630 - | - @ | |) | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 1600 - | - @ | | @ | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 1605 - | - @ | - | _ | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1055 - | - @ | | @ | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1600 - | - @ | - |) | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1605 - | - @ | | 9 | - (| @ |
| | 2353 LOXCREEN PAINT LINE EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 930 - | - @ | - | | - (| @ |
| | 2357 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1045 - | 22.5 @ | | _ | - (| @ |
| | 2357 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 910 - | 24.5 @ | - | _ | - (| @ |
| | 2358 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 1040 - | 23.5 @ | ı - | @ | - 0 | @ |
| | 2358 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1010 - | 22.5 @ | - | @ | - (| @ |
| | 2359 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 915 - | 32 @ | | @ | - (| @ |
| | 2359 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 910 - | 30 @ | - | _ | - (| @ |
| | 2359 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 905 - | 31 @ | - |) | - (| @ |
| | 2360 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 940 - | 23.5 @ | - | @ | - (| @ |
| | 2360 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 900 - | 23.5 @ | ı - | @ | - 0 | @ |
| | 2361 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 1020 - | - @ | - | @ | - (| @ |
| | 2361 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 1005 - | - @ | - | @ | - (| @ |
| | 2361 NEW MADRID POWER PLANT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 930 - | 23.5 @ | - | @ | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760914 1000 - | - @ | - | @ | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 845 - | 24 @ | - | _ | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 840 - | - @ | - | @ | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 855 - | 24 @ | - | | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 850 - | - @ | - | _ | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 840 - | 23 @ | - | | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790821 750 - | 27 @ | - | | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790820 1007 - | - @ | - | • | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790822 825 - | 25 @ | - | • | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790821 750 - | - @ | - | | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790823 825 - | 26 @ | - |) | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 790822 825 - | - @ | |) | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810916 1000 - | 22 @ | | | - (| @ |
| | 2365 LOXCREEN ANODIZING EFFLUENT | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810917 1030 - | 18 @ | | _ | | @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 745 - | 23 @ | - |) | | @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760914 835 - | - @ | <u>-</u> | @ | | @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 805 - | 22 @ | - |) | | @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760915 745 - | - @ | <u> </u> | 9 | | @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760917 800 - | 21.5 @ | - | | - (| @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 760916 805 - | - @ | <u>-</u> |) | - (| @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780725 929 - | - @ | - | | - (| @ |
| | 2468 PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780726 835 - | 29 @ | - | @ | - (| @ |

| Station | | Station Description | Media | Sdate | Time I | Depth 1 | 0 | 11 | 1 | 34 |
|-----------|------|---------------------------------|------------------------------------|--------|--------|---------|-----|----|-----|-----|
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780726 | 830 | | @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780727 | 820 | | 5 @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780728 | 820 | - 2 | 8 @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 780727 | 815 | | @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810915 | 855 | | @ | - | (0) | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810916 | 1055 | - 2 | 4 @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810916 | 1050 | | @ | - | @ | - @ |
| | 2468 | PLASTENE SUPPLY-HOLDING POND | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 810917 | 845 | - 2 | 3 @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | @ | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| MO0001171 | | ASSOC ELECT COOP NEW MADRID / | /TYPA/IND/TREATD/OUTFL/NONAMB/PIPE | 830601 | - | | @ | - | (0) | - @ |
| | 988 | PORTAGEVILLE WTP LIME POND EFF | /TYPA/MUN/PTRTMT/OUTFL/NONAMB/PIPE | 741023 | 745 | - 1 | 5 @ | - | @ | - @ |
| | 988 | PORTAGEVILLE WTP LIME POND EFF | /TYPA/MUN/PTRTMT/OUTFL/NONAMB/PIPE | 741024 | 725 | - 1 | 5 @ | - | @ | - @ |
| | 988 | PORTAGEVILLE WTP LIME POND EFF | /TYPA/MUN/PTRTMT/OUTFL/NONAMB/PIPE | 741025 | 715 | - 15 | 5 @ | - | (0) | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760914 | 900 | | @ | - | @ | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760915 | 810 | - 2 | 3 @ | - | @ | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760915 | 805 | | @ | - | @ | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760916 | 815 | - 2 | 4 @ | - | @ | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760916 | 810 | | @ | - | @ | - @ |
| | 2354 | CARUTHERSVILLE LAGOON EFFLUENT | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 760917 | 815 | | @ | - | @ | - @ |
| | 8538 | CARUTHERSVILLE WWTP OUTFALL 001 | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 900606 | 1000 | - 2 | 5 @ | - | @ | - @ |
| | 8538 | CARUTHERSVILLE WWTP OUTFALL 001 | /TYPA/MUN/TREATD/OUTFL/NONAMB/PIPE | 900605 | 1001 | | @ | - | @ | - @ |

| Table B1. Databas | | I | | | | | | | 1 | | П | | | | | | | | | | | | | | | | | | \top | | T |
|-------------------|----|---|-----|----|----|---|------------|------|---|----|---|----|---|-----|----|---|-----|---|-----|---|-----|---|------|---|-----|----|-----|------|--------|----------|-----|
| Station | 50 |) | 56 | | 59 | | 60 | 61 | | 65 | | 70 | | 74 | 77 | | 90 | | 94 | | 95 | | 300 | | 301 | 31 | 10 | 400 |) | 403 | 1 |
| 8798 | | @ | - @ | Τ. | | @ | - @ | - 0. | @ | | @ | | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2752 | | @ | - @ | _ | | @ | - @ | | @ | | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ |
| 8730 | | @ | - @ | _ | | @ | - @ | _ | @ | | @ | _ | @ | - @ | - | @ | _ | @ | _ | @ | - | @ | - | @ | - @ | - | @ | _ | @ | _ | @ |
| 8730 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | | @ |
| 2356 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 440 | | - | @ | - @ | | @ | - | @ | | 2 @ |
| 2356 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 480 | _ | - | @ | - @ | - | @ | - | @ | | 3 @ |
| | | @ | | _ | | @ | | | | | @ | - | @ | - @ | | @ | | @ | | @ | 460 | | | | | - | | | @ | 7.0 | @ |
| 2356 | | | | _ | | @ | | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 480 | @ | - | @ | • | - | @ | - | @ | - 0.1 | _ |
| 2356 | | @ | • | _ | | | • | | @ | | | | | | | | - | | - | | | | | @ | - @ | - | 0 | - | @ | | 0 |
| 2469 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 450 | | - | @ | - @ | | 4 @ | - | | 8. | 0 |
| 2469 | | @ | - @ | _ | 36 | | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | | @ | - @ | _ | 43 | | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 420 | | - | @ | - @ | | 1 K | - | @ | 8.1 | @ |
| 2469 | | @ | - @ | | 29 | | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | <u> </u> | @ |
| 2469 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 420 | | - | @ | - @ | | 8 K | - | @ | | @ |
| 2469 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ |
| 2469 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | | @ | - @ | | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | | @ | - @ | | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 7.7 | 7 @ |
| 2469 | - | @ | - @ | | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | 4 @ | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 7.2 | 2@ | - | @ |
| 2469 | - | @ | - @ | _ | | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 7.31 | 1 @ | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 7.03 | 3 @ | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 7.37 | 0 | - | @ |
| 2469 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 210066 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | 457 | @ | 498 | @ | - | @ | 12 | @ | - @ | - | @ | 8.14 | 1 @ | - | @ |
| 210066 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 210066 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | 454 | @ | 470 | @ | - | @ | 13.5 | @ | - @ | - | @ | 7.98 | 3 @ | - | @ |
| 210066 | | @ | - @ | - | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 457 | @ | 469 | @ | - | @ | 13 | | - @ | - | @ | | 3 @ | - | @ |
| 210066 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 459 | | 468 | | - | @ | 12.9 | | - @ | - | @ | | 3 @ | - | @ |
| 210066 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 460 | | 469 | | - | @ | 12.8 | | - @ | - | @ | 8.01 | 1 @ | - | @ |
| 210066 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 461 | | 468 | | - | @ | 12.7 | | - @ | - | @ | 8.01 | | - | @ |
| 210067 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | . @ | - | @ |
| 210067 | | @ | - @ | _ | | @ | - @ | _ | @ | | @ | - | @ | - @ | - | @ | 439 | | 606 | _ | - | @ | 13.2 | | - @ | - | @ | 8.02 | - | - | @ |
| 210068 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 210068 | | @ | - @ | _ | | @ | - @ | _ | @ | | @ | _ | @ | - @ | _ | @ | 439 | | 519 | | _ | @ | 12.5 | | - @ | _ | @ | 8.02 | | - | @ |
| 477504 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | | @ | - @ | _ | @ | 678 | | | @ | | @ | 11.5 | | - @ | - | @ | | 3 @ | | @ |
| 477504 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 456 | | 320 | | - | @ | 13.2 | | - @ | - | @ | 7.88 | | - | @ |
| 477504 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 458 | | 319 | | - | @ | 13.2 | | - @ | - | @ | 7.84 | | - | @ |
| 477504 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 459 | | 320 | | - | @ | 12.8 | | - @ | - | @ | 7.83 | | - | @ |
| 477504 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 460 | | 318 | | - | @ | 12.7 | | - @ | - | @ | 7.81 | | - | @ |
| | | | | _ | | | | | | | | | | | | | | | | | - | | | | | | | | | | |
| 477504 | | @ | - @ | | | @ | - @ - @ | - | @ | | @ | - | @ | • | - | @ | 462 | | 321 | | - | @ | 12.6 | | - @ | - | @ | | 3 @ | - | @ |
| 477505 | | @ | 9 | _ | | @ | 0 | - | @ | | @ | - | @ | 9 | - | @ | 640 | | 440 | | - | @ | 9.8 | | - @ | - | @ | 7.77 | | | @ |
| 477505 | | @ | - @ | _ | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 628 | | 442 | | - | @ | 9.8 | | - @ | - | @ | 7.77 | | - | @ |
| 477505 | | @ | - @ | | | @ | - @ | - | @ | | @ | - | @ | - @ | - | @ | 619 | _ | 443 | _ | - | @ | 9.8 | | - @ | - | @ | 7.77 | | - | @ |
| 477505 | - | @ | - @ | - | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | 609 | œ | 447 | @ | - | @ | 9.6 | @ | - @ | - | @ | 7.74 | 4 @ | - | @ |

| Station | 50 | | 56 | | 5 | 59 | 60 | | 61 | | 65 | | 70 | | 74 | 7 | 7 | 90 | | 94 | 95 | 5 | 300 | | 301 | 3 | 310 | 400 | | 403 | |
|-----------------|----|---|----|---|---|----|----------|---|----|---|-----|---|----|---|-----|---|---|-------|------------|-------|-----|-----|------|---|------|---|-------|------|---|-----|---|
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 608 @ | 0 4 | 156 @ | - | @ | 9 | @ | - @ | - | @ | 7.68 | @ | - | @ |
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | 445 @ | 0 2 | 299 @ | - | @ | 12.8 | @ | - @ | - | @ | 7.84 | @ | - | @ |
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 448 @ | 0 2 | 298 @ | - | @ | 12.7 | @ | - @ | - | @ | 7.81 | @ | - | @ |
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 451 @ | | 299 @ | | @ | 12.4 | @ | - @ | - | @ | 7.78 | @ | - | @ |
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 453 @ | 0 3 | 300 @ | - | @ | 12.3 | @ | - @ | - | @ | 7.76 | @ | - | @ |
| 477505 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 455 @ | 0 3 | 300 @ | - | @ | 12.3 | @ | - @ | - | @ | 7.76 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | 625 @ | 0 3 | 399 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.07 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 624 @ | 0 3 | 399 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.08 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 624 @ | 2 | 399 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.08 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 624 @ | 0 4 | 100 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.07 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | 623 @ | 0 4 | 101 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.07 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 623 @ | 20 4 | 100 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.07 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | 623 @ | 0 3 | 399 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.06 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 623 @ | 2 | 399 @ | - | @ | 11.3 | @ | - @ | - | @ | 8.06 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 453 @ | 0 3 | 312 @ | - | @ | 12.7 | @ | - @ | - | @ | 7.78 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | 455 @ | 0 3 | 311 @ | - | @ | 12.6 | @ | - @ | - | @ | 7.76 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 456 @ | 0 3 | 311 @ | - | @ | 12.5 | @ | - @ | - | @ | 7.76 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 457 @ | 0 3 | 312 @ | - | @ | 12.5 | @ | - @ | - | @ | 7.75 | @ | - | @ |
| 477506 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | 459 @ | 0 3 | 311 @ | - | @ | 12.5 | @ | - @ | - | @ | 7.74 | @ | - | @ |
| 477507 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u> </u> | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 477507 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u> </u> | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 670000 @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u>0</u> - | @ | 430 | 0 @ | 5 | @ | 66 @ | - | @ | 6.2 | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u>0</u> - | @ | - | @ | 4 | @ | 51 @ | | 0.8 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 197000 @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u> </u> | @ | 520 | 0 @ | 5.8 | @ | 73 @ | | 1.8 @ | 7.2 | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - @ | 2) - | @ | - | @ | - | @ | 72 @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 417000 @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | - @ | 2) - | @ | - | @ | - | @ | - @ | | 2.7 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 297000 @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - @ | 2) - | @ | - | @ | - | @ | - @ | | 1.5 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | - @ | 2) - | @ | 470 | 0 | 9.4 | @ | 81 @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 298000 @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| 2) - | @ | - | @ | - | @ | - @ | | 1.8 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - @ | 2) - | @ | 560 | 0 | 12.4 | @ | 99 @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | 241000 @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | | 2) - | 9 | | @ | - | @ | - @ | | 4 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ |) | - (| @ | - | @ | - @ | - | @ | - (| <u>0</u> - | @ | 400 | 0 | 12 | @ | 92 @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ |) | | @ | | @ | - @ | - | @ | - (| <u>)</u> - | @ | | @ | - | @ | - @ | | 2.5 @ | 7.5 | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | | @ | | | @ | | @ | - @ | - | @ | | <u>0</u> - | 0 | | 0 | 10.3 | @ | 87 @ | - | @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | | @ | - @ | - | @ | | <u> </u> | @ | | @ | - | @ | - @ | | 2.4 @ | - | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | | @ | _ | | @ | | @ | - @ | - | @ | | <u>0</u> - | @ | _ | @ | - | @ | - @ | | 0 @ | | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | | @ | _ | | @ | | @ | - @ | - | @ | | D - | @ | | @ | - | @ | - @ | | 1.6 @ | | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | _ | @ | _ | | @ | | @ | - @ | - | @ | | D - | @ | | 0 @ | 6.3 | | 72 @ | - | @ | | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | | @ | _ | | @ | | @ | - @ | - | @ | | D - | @ | | 0 | 6.5 | | 79 @ | - | @ | | @ | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | _ | @ | _ | | @ | | @ | - @ | - | @ | | 0 - | @ | | @ | - | @ | - @ | | 1.4 @ | 7.8 | | - | @ |
| 7024070 | - | @ | - | @ | - | @ | - @ | | @ | | | @ | | @ | - @ | - | @ | | D - | @ | | 0 @ | 7.5 | - | 97 @ | - | @ | 7.6 | _ | - | @ |
| 5600 | - | @ | - | @ | - | @ | - @ | | @ | | | @ | | @ | - @ | - | @ | | 0 - | @ | | @ | - | @ | - @ | - | @ | | @ | 7.7 | |
| 5602 | - | @ | - | @ | - | @ | - @ | | @ | | | @ | | @ | - @ | - | @ | | 0 - | @ | | @ | - | @ | - @ | | 2 K | | @ | 7.3 | _ |
| 360019089484301 | - | @ | - | @ | - | @ | - @ | | @ | | | @ | | @ | - @ | - | @ | | D - | @ | | @ | - | @ | - @ | - | @ | | @ | - | @ |
| 360019089484301 | - | @ | - | @ | - | @ | - @ | | @ | _ | | @ | | @ | - @ | - | @ | | 0 - | @ | | | - | @ | - @ | - | @ | | @ | - | @ |
| 360032089553201 | - | @ | - | @ | - | @ | - @ | | @ | _ | | @ | - | @ | - @ | - | @ | | 0 - | @ | | @ | - | @ | - @ | - | @ | | @ | 6.4 | |
| 360320089522001 | - | @ | - | @ | - | @ | - @ | _ | @ | | | @ | - | @ | - @ | - | @ | | 0 - | @ | _ | @ | - | @ | - @ | - | @ | | @ | - | @ |
| 360526089440601 | - | @ | - | @ | - | @ | - @ | - | @ | ! | - (| @ | - | @ | - @ | - | @ | - (| 0 - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 6.5 | @ |

| Station | 50 | | 56 | 59 | a | 60 | 61 | 65 | | 70 | | 74 | | 77 | 7 | 90 | П | 94 | 95 | 300 | | 301 | | 310 | T | 400 | 403 |
|-----------------|-----|---|----------|----|---|-----|-----|----|---|----|---|-------|---|----|---|----|---|-----|--------|-----|-----|-----|---|-----|-----|--------|-------|
| 360949089435001 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - ' ' | @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | 7.3 @ | - @ |
| 360949089435001 | - @ | | @ | | @ | - @ | - @ | _ | @ | | @ | _ | @ | | @ | _ | @ | - @ | 608 @ | _ | @ | _ | @ | | @ | - @ | - @ |
| 360949089435001 | - @ | | @ | | @ | - @ | - @ | _ | @ | | @ | _ | @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | | @ | 7.9 @ | - @ |
| 361030089425001 | - @ | | @ | | @ | - @ | - @ | _ | @ | - | @ | - | @ | | @ | | @ | - @ | - @ | _ | @ | _ | @ | | @ | 7.9 @ | - @ |
| 361030089425001 | - @ | | @ | | @ | - @ | - @ | _ | @ | | @ | _ | @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | | @ | 7.5 @ | - @ |
| 361130089394001 | - @ | | @ | | @ | - @ | - @ | _ | @ | | @ | _ | @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | | @ | - @ | - @ |
| 361140089392903 | - @ | | @ | | @ | - @ | - @ | _ | @ | | @ | - | @ | | @ | | @ | - @ | - @ | _ | @ | _ | @ | | @ | 6.1 @ | - @ |
| 361140089393001 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | | @ | 6.3 @ | - @ |
| 361140089393101 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - @ | - | @ | - | @ | | @ | 7.3 @ | - @ |
| 361242089390401 | - @ | | @ | _ | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 862 @ | - | @ | - | @ | | @ | 6.8 @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | 8.1 @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | | @ | _ | @ | - @ | - @ | _ | @ | - | @ | | @ | 8.1 @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | 7.8 @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | - | @ | _ | @ | - | @ | _ | @ | _ | @ | - @ | 513 @ | - | @ | - | @ | | @ | 8 @ | - @ |
| 361415089450201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | 470 @ | l - | @ | _ | @ | | @ | 8 @ | 7.7 @ |
| 361415089450201 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 538 @ | - | @ | - | @ | | @ | 8.2 @ | 7.7 @ |
| 361415089450201 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 525 @ | - | @ | - | @ | | @ | - @ | - @ |
| 361418089444501 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | 6.9 @ | - @ |
| 361425089450701 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | 7.95 @ | - @ |
| 361455089443301 | - @ | | @ | _ | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | - @ |
| 361455089443301 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | - @ |
| 361455089443301 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | 6.5 @ |
| 361920089432801 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | - @ |
| 361937089343201 | - @ | _ | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | 950 @ | - | @ | - | @ | | @ | - @ | - @ |
| 362100089422001 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - @ | _ | @ | - | @ | | @ | 7.3 @ | - @ |
| 362252089420201 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | 6 @ |
| 362338089364401 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | 250 @ | - | @ | - | @ | | @ | 7.1 @ | - @ |
| 362341089365701 | - @ | | @ | _ | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 140 @ | - | @ | - | @ | | @ | 6.5 @ | - @ |
| 362355089364801 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 250 @ | _ | @ | - | @ | | @ | 7.2 @ | - @ |
| 362356089364001 | - @ | _ | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 260 @ | - | @ | - | @ | | @ | 7.2 @ | - @ |
| 362406089365401 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 470 @ | - | @ | - | @ | | @ | 7.2 @ | - @ |
| 362408089364301 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | | @ | _ | @ | _ | @ | | @ | - @ | 420 @ | - | @ | - | @ | | @ | 7.3 @ | - @ |
| 362419089365201 | - @ | _ | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 440 @ | - | @ | - | @ | | @ | 7.3 @ | - @ |
| 362440089334801 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 2400 @ | - | @ | - | @ | | @ | - @ | - @ |
| 362527089421101 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | 6.8 @ | - @ |
| 362527089421101 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | 6.8 @ | - @ |
| 362527089421101 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 550 @ | _ | @ | - | @ | | @ | 7.3 @ | - @ |
| 362528089414301 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 500 @ | _ | @ | - | @ | | @ | 6 @ | - @ |
| 362528089414301 | - @ | | @ | _ | @ | - @ | - @ | - | @ | _ | @ | - | @ | _ | @ | _ | @ | - @ | - @ | - | @ | - | @ | | @ | 7.2 @ | - @ |
| 362530089414001 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - @ | l - | @ | _ | @ | | @ | - @ | - @ |
| 362640089295301 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 937 @ | - | @ | - | @ | | @ | 6.9 @ | - @ |
| 362718089361101 | - @ | | @ | _ | @ | - @ | - @ | - | @ | _ | @ | - | @ | _ | @ | _ | @ | - @ | - @ | - | @ | - | @ | | @ | - @ | - @ |
| 362955089293301 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | 698 @ | l - | @ | _ | @ | | @ | 7.1 @ | - @ |
| 363039089240901 | - @ | _ | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | 865 @ | - | @ | - | @ | | @ | 7.1 @ | - @ |
| 363107089363401 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 1400 @ | - | @ | - | @ | | @ | 7.6 @ | - @ |
| 363107089363401 | - @ | | @ | _ | @ | - @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - @ | l - | @ | _ | @ | | @ | 7.5 @ | - @ |
| 363107089363401 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | 7.4 @ | - @ |
| 33310700000401 | | · | <u>ت</u> | | | • | • | 1 | - | | | | - | | - | | ~ | • | | 1 | · • | 1 | 0 | | · 1 | | - |

| Station | 50 | | 56 | | 59 | | 60 | | 61 | 6 | 5 | 70 | | 74 | | 77 | | 90 | | 94 | | 95 | | 300 | | 301 | | 310 | | 400 | | 403 | |
|-----------------|-----|---|------|----------|----|---|----|---|------|------------|---|----|---|----|---|----|---|-----|---|-----|---|-------|---|-----|-----|-----|---|-----|---|------|---|--------|----------|
| 363107089363401 | - | @ | | @ | - | @ | - | @ | - (0 | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 7.7 | @ | | @ |
| 363107089363401 | - | @ | | @ | - | @ | - | @ | - 0 |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 7.3 | _ | | @ |
| 363107089363401 | - | @ | | <u>a</u> | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | | @ | - | @ | 7.3 | _ | - | @ |
| 363107089363401 | - | @ | | @ | - | @ | - | @ | - 0 | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 7.4 | | - | @ |
| 363107089363401 | - | @ | | @ | - | @ | - | @ | - (0 | 2 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | 7.7 | @ | - | @ |
| 363107089363401 | - | @ | | @ | - | @ | - | @ | - (0 | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 390 | @ | - | @ | - | @ | _ | @ | 7.1 | _ | - | @ |
| 363107089363401 | - | @ | - @ | @ | - | @ | - | @ | - @ |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 1660 | @ | | @ | - | @ | - | @ | 7.7 | @ | 7.1 | @ |
| 363107089363401 | - | @ | - @ | @ | - | @ | - | @ | - @ |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 1750 | @ | | @ | - | @ | - | @ | 7.7 | @ | 8.2 | @ |
| 363126089291501 | - | @ | - @ | @ | - | @ | - | @ | - @ |] - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 588 | @ | - | @ | - | @ | - | @ | 7.2 | @ | - | @ |
| 363130089370001 | - | @ | - @ | @ | - | @ | - | @ | - @ | } - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 1 | @ | - | @ | 7.8 | @ | - | @ |
| 363157089291701 | - | @ | - @ | @ | - | @ | - | @ | - (0 | } - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 588 | @ | - | @ | - | @ | - | @ | 7.2 | @ | - | @ |
| 363200089350001 | - | @ | - @ | @ | - | @ | - | @ | - (0 | } - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 7.7 | @ | - | @ |
| 363219089310701 | - | @ | - @ | @ | - | @ | - | @ | - (0 | } - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 754 | @ | - | @ | - | @ | - | @ | 7.1 | @ | - | @ |
| 363447089173401 | - | @ | - @ | @ | - | @ | - | @ | - @ |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 530 | @ | - | @ | - | @ | | @ | 6.9 | @ | - | @ |
| 363500089320001 | | @ | - @ | @ | - | @ | - | @ | - @ |) - | @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 1 | @ | - | @ | 7.3 | @ | - | @ |
| 363517089124501 | - | @ | - @ | @ | - | @ | - | @ | - @ |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 898 | @ | - | @ | - | @ | - | @ | 7.4 | @ | - | @ |
| 363523089361001 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | 7.3 | | - | @ |
| 363523089361001 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 1200 | | - | @ | - | @ | 1 | @ | 8.4 | | - | @ |
| 363659089142801 | - | @ | | @ | - | @ | - | @ | - @ |) - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 758 | @ | - | @ | - | @ | - | @ | 7.3 | @ | - | @ |
| 363827089172701 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 7.2 | | - | @ |
| 363827089172701 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 6.6 | _ | - | @ |
| 363827089172701 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 17 | @ | - | @ | - | @ | - | @ | 6 | _ | - | @ |
| 363830089173501 | - | @ | | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 7.2 | _ | - | @ |
| 363840089170001 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 6.9 | _ | - | @ |
| 364055089103201 | - | @ | | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | 6.7 | @ |
| 364222089243401 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 280 | @ | - | @ | | @ | - | @ | 7.6 | _ | - | @ |
| 364224089273301 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 360 | | - | @ | | @ | - | @ | 7.6 | | - | @ |
| 364240089313201 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 240 | _ | • | @ | - | @ | - | @ | 7.2 | _ | - | @ |
| 364247089273401 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 345 | | • | @ | - | @ | - | @ | 7.6 | _ | - | @ |
| 364331089123701 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | • | @ | | @ | - | @ | | @ | 6.7 | @ |
| 364424089151701 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | 6.3 | _ | - | @ |
| 364453089282401 | - | @ | | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | - | @ |
| 364453089282401 | - | @ | | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | | @ |
| 364453089282401 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | 5.4 | @ |
| W47371 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 265 | _ | 521 | @ | - | @ | 2.7 | _ | | @ | - | @ | 7.39 | _ | - | @ |
| W47371 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 330 | - | 523 | | - | @ | 2.9 | | | @ | - | @ | 7.46 | _ | | @ |
| W47372 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 232 | _ | 924 | | - | @ | 0.6 | | | @ | - | @ | 6.96 | _ | - | @ |
| W47372 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 334 | - | 905 | _ | - | @ | 0.2 | _ | - | @ | - | @ | 6.84 | _ | | @ |
| W47373 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 240 | _ | 840 | | - | @ | 2.4 | _ | | @ | - | @ | | @ | | @ |
| W47373 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | 250 | _ | 830 | | - | @ | 1.7 | _ | | @ | - | @ | 6.84 | _ | | @ |
| 2363 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 400 | @ | • | @ | | @ | - | @ | | @ | - | @ |
| 2363 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 480 | @ | - | @ | | @ | - | @ | | @ | - | @ |
| 2363 | 445 | | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 470 | @ | - | @ | | @ | - | @ | | @ | - | ® |
| 2363 | - | @ | | @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 470 | _ | - | @ | | @ | - | @ | | @ | 10.0 | @ |
| 5601 | - | @ | | @ @ | - | @ | - | @ | - (0 | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | 10.3 | |
| 989 | - | @ | | @ | | @ | | @ | • | | @ | | @ | - | @ | - | @ | | @ | | @ | - | @ | - | @ | | @ | | @ | | @ | - 44.0 | @ |
| 989 | - | @ | | @ @ | - | @ | - | @ | - (| | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 658 | _ | • | @ @ | | @ | 11 | _ | | @ | 11.6 | _ |
| 989 | - | @ | - (0 | @ | - | @ | - | @ | - (| <i>!</i> - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ |

| Station | 50 | | 56 | 59 | 9 | 60 | 61 | 65 | | 70 | | 74 | | 7 | 7 | 90 | | 94 | 95 | 300 |) | 301 | | 310 | 400 | | 403 |
|---------|-----|-------|----|----|-----|-----|-----|----|---|----|---|----|---|---|---|----|---|-----|--------|------------|---|-----|---|-------|------|---|--------|
| 989 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 2470 @ | D - | @ | - | @ | 24 @ | - | @ | 10.8 @ |
| 989 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| D - | @ | - | @ | - @ | - | @ | - @ |
| 989 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 2440 @ | D - | @ | - | @ | 20 @ | - | @ | 10.9 @ |
| 990 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| D - | @ | - | @ | - @ | - | @ | - @ |
| 990 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| D - | @ | - | @ | 2 @ | - | @ | 11.7 @ |
| 990 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 2920 @ | D - | @ | - | @ | 10 @ | - | @ | 11 @ |
| 990 | - @ | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u> </u> | @ | - | @ | - @ | - | @ | - @ |
| 990 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 2490 @ | D - | @ | - | @ | 14 @ | - | @ | 10.6 @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u>)</u> - | @ | - | @ | - @ | - | @ | - @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u>)</u> - | @ | - | @ | - @ | - | @ | - @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u>)</u> - | @ | - | @ | - @ | - | @ | - @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u>)</u> - | @ | - | @ | - @ | - | @ | - @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u> </u> | @ | - | @ | - @ | - | @ | - @ |
| 2353 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| <u>)</u> - | @ | - | @ | - @ | - | @ | - @ |
| 2357 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 6700 @ | D - | @ | - | @ | - @ | - | @ | 7.2 @ |
| 2357 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 4000 @ | <u>)</u> - | @ | - | @ | - @ | - | @ | 8.2 @ |
| 2358 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 930 @ | <u>0</u> - | @ | - | @ | - @ | - | @ | 8.3 @ |
| 2358 | - @ | ! - | @ | - | @ | - @ | - | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 1000 @ | <u>)</u> - | @ | - | @ | - @ | • | @ | 8 @ |
| 2359 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 430 @ | D - | @ | - | @ | - @ | - | @ | 8.1 @ |
| 2359 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 460 @ | <u>)</u> - | @ | - | @ | - @ | - | @ | 8.2 @ |
| 2359 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 460 @ | <u>)</u> - | @ | - | @ | - @ | - | @ | 8 @ |
| 2360 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 260 @ | D - | @ | - | @ | - @ | - | @ | 8 @ |
| 2360 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 260 @ | <u>)</u> - | @ | - | @ | - @ | - | @ | 7.6 @ |
| 2361 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 400 @ | D - | @ | - | @ | - @ | - | @ | 7.9 @ |
| 2361 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | <u>)</u> - | @ | - | @ | - @ | - | @ | 7.9 @ |
| 2361 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | - @ | - | @ | 7.6 @ |
| 2365 | - @ | _ | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | D - | @ | - | @ | 10 @ | - | @ | 10.6 @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | D - | @ | - | @ | - @ | - | @ | - @ |
| 2365 | | | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | D - | @ | - | @ | 17 @ | - | @ | 11.4 @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | _ | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | - | @ | - @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | 8 K | - | @ | 10 @ |
| 2365 | | _ | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | D - | @ | - | @ | - @ | - | @ | - @ |
| 2365 | - @ | _ | @ | | 2 @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | <u>0</u> - | @ | - | @ | - @ | 4.9 | @ | - @ |
| 2365 | | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | - | @ | 4.7 @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | _ | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | 9.9 | @ | - @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | 7.2 @ | - | @ | 10 @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | 11.9 | | - @ |
| 2365 | - @ | _ | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | | @ | 12.2 @ |
| 2365 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | 47 @ | | @ | 4.4 @ |
| 2365 | - @ | _ | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | 29 @ | | @ | 6.9 @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | - | @ | - @ |
| 2468 | - @ | _ | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | 3 @ | - | @ | 9 @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | _ | @ | - | @ | - | @ | - @ | | 0 - | @ | - | @ | - @ | - | @ | - @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | 2 @ | - | @ | 8.8 @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | - @ | - | @ | - @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | 8 K | - | @ | 8.8 @ |
| 2468 | - @ | | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | - @ | - | @ | 8.7 @ |
| 2468 | - @ | ! - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - (| 0 - | @ | - | @ | - @ | - | @ | - @ |

| Station | | 50 | | 56 | | 59 | | 60 | 61 | 65 | | 70 | | 74 | | 7 | 7 | 90 | | 94 | | 95 | 300 | | 301 | | 310 | 400 | 403 |
|-----------|------|----|---|----------|---|----|---|-----|-----|----|---|----|---|----|---|---|---|----|---|-----|---|-------|-----|---|-----|---|----------|--------|-------|
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - @ | - @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - @ | - @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | | @ | - @ | - @ | - @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - @ | 8.8 @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | | @ | 33 @ | - @ | 7.5 @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | 6.7 @ | - @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | 29 @ | - @ | 7.6 @ |
| | 2468 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | 8 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 1 @ | 8 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | 2 @ | - @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | . @ | 8 @ | |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | 9 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | 7861.9 @ | - @ | - @ |
| MO0001171 | | - | @ | 1 | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 1 @ | 8 @ | |
| MO0001171 | | - | @ | 17880000 | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | 2 K | - @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | . @ | 6 @ | - @ |
| MO0001171 | | - | @ | 18720000 | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | 6 @ | |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | 312.4 K | - @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | 1 @ | 8 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | 2 K | - @ | |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - @ | 8 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | . @ | 8 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | 4815.4 K | - @ | - @ |
| MO0001171 | | - | @ | 1 | @ | - | @ | - @ | - @ | - | @ | • | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | • | @ | 1 @ | 9 @ | - @ |
| MO0001171 | | - | @ | 43200 | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | 2 K | - @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | 3.3 @ | |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | 8.18 @ | - @ |
| MO0001171 | | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | 0.7 K | - @ | |
| | 988 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 387 @ | - | @ | - | @ | 1 @ | - @ | |
| | 988 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 408 @ | - | @ | - | @ | 0 @ | - @ | |
| | 988 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 384 @ | - | @ | - | @ | 0 @ | - @ | |
| | 2354 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 400 @ | - | @ | - | @ | 20 @ | - @ | |
| | 2354 | - | @ | - | @ | - | @ | - @ | 1 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | - @ | - @ |
| | 2354 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 410 @ | - | @ | - | @ | 13 @ | - @ | |
| | 2354 | - | @ | - | @ | - | @ | - @ | 1 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | - @ | |
| | 2354 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 420 @ | - | @ | - | @ | 12 @ | - @ | |
| | 2354 | - | @ | - | @ | - | @ | - @ | 1 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - @ | - | @ | - | @ | - @ | - @ | |
| | 8538 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - @ | - | @ | - | @ | - @ | 7.4 @ | |
| | 8538 | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | 460 @ | - | @ | - | @ | - @ | - @ | - @ |

| Table B1. | Database | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|----------|-----|------------|-----|---|-----|---|-----|---|------|---|-----|---|------|---|-----|---|-----|---|-----|-----|---|-----|---|-------|-----|--------|----|---|-----|---|------|---|
| Station | | 410 | | 500 | | 530 | | 600 |) | 605 | | 608 | | 610 | | 612 | | 615 | | 618 | 619 | | 620 | 1 | 625 | | 630 | 63 | 1 | 635 | | 665 | |
| | 8798 | - @ | 0 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 2752 | - @ | 9 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 8730 | - @ | 0 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 8730 | - @ | 0 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2356 | - @ | 9 - | . (| @ | 59 | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 2356 | - @ | <u> </u> | . (| @ | 51 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2356 | - @ | 9 - | . (| @ | - | @ | - | @ | | @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 2356 | - @ | 0 - | . (| @ | 44 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | 9 - | . (| @ | 4 | @ | - | @ | | @ | - | @ | 0.18 | @ | - | @ | - | @ | - @ | - | @ | - | @ | 0.2 @ | - | . @ | - | @ | - | @ | 0.2 | @ |
| | 2469 | - @ |) - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | 2 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | 0 - | . (| @ | 4 | @ | - | @ | - | @ | - | @ | 0.4 | K | - | @ | - | @ | - @ | - | @ | - | @ | 0.4 K | | 0.2 K | - | @ | - | @ | 0.2 | @ |
| | 2469 | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | _ | _ | @ | 2 | @ | - | @ | 1 | @ | - | @ | 0.4 | | | @ | - | @ | - @ | - | @ | - | @ | 0.4 K | | 0.2 @ | - | @ | - | @ | 0.2 | |
| | 2469 | - @ | | | @ | - | @ | - | @ | | @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | 9 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | _ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | <u>)</u> - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | _ | _ | @ | 7 | @ | - | @ | - | @ | - | @ | 0.43 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | 0 - | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | _ | | @ | 7 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | <u>)</u> - | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |
| | 2469 | - @ | | | @ | | U | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 210066 | - @ | | | @ | 57 | | - | @ | 0.76 | | - | @ | 0.1 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 3.16 @ | - | @ | - | @ | 0.25 | |
| | 210066 | - @ | | | @ | 54 | | - | @ | 1.6 | | - | @ | 0.09 | | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 2.2 @ | - | @ | - | @ | 0.23 | @ |
| | 210066 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 210066 | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | . @ | - | @ | - | @ | - | @ |
| | 210066 | - @ | _ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 210066 | - @ | | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | 9 | - | @ | - | @ | - | @ |
| | 210066 | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | | - | @ | - | @ | - | @ |
| | 210067 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | • | - | @ | - | @ | - | @ |
| | 210067 | - @ | _ | | @ | | @ | - | @ | | @ | - | @ | 0.01 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | 0.01 @ | - | @ | - | @ | 0.12 | @ |
| | 210068 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 210068 | - @ | | | @ | 18 | | - | @ | 0.48 | | - | @ | 0.01 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 0.14 @ | - | @ | - | @ | 0.08 | |
| | 477504 | - @ | | | @ | 54 | | - | @ | 0.26 | _ | - | @ | 0.65 | | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 0.55 @ | - | @ | - | @ | 0.24 | _ |
| | 477504 | - @ | _ | | @ | 78 | | - | @ | 0.73 | | - | @ | 0.08 | | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 2.1 @ | - | @ | - | @ | 0.2 | |
| | 477504 | - @ | _ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | 9 | - | @ | - | @ | - | @ |
| | 477504 | - @ | _ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | • | - | @ | - | @ | - | @ |
| | 477504 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | • | - | @ | - | @ | - | @ |
| | 477504 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | _ | . @ | - | @ | - | @ | - | @ |
| | 477505 | - @ | | | @ | 5 | _ | - | @ | 0.31 | @ | - | @ | 0.19 | | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | 2.4 @ | - | @ | - | @ | 0.08 | @ |
| | 477505 | - @ | _ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | • | - | @ | - | @ | - | @ |
| | 477505 | - @ | _ | _ | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | | • | - | @ | - | @ | - | @ |
| | 477505 | - @ | 0 - | . (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - @ | ! - | . @ | - | @ | - | @ | - | @ |

| Station | 410 | | 500 | | 530 | 600 |) | 605 | | 608 | 610 | | 612 | | 615 | | 618 | | 619 |) | 620 | 625 | 5 | 630 |) | 631 | 1 | 635 | 5 | 665 |
|------------------------------|----------------|---|-------|---|--------------|-----|---|------|---|------------|------|---|-----|---|-----|---|--------|---|-----|---|------------|-----|---|------|---|-----|---|-----|---|--------|
| 477505 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477505 | - | @ | - | @ | 16 @ | - | @ | 0.53 | @ | - @ | 0.06 | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 1.4 | @ | - | @ | - | @ | 0.12 @ |
| 477505 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477505 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477505 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477505 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | 56 @ | - | @ | 0.32 | @ | - @ | 0.12 | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 2.17 | @ | - | @ | - | @ | 0.12 @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | - | @ | | @ | - @ | - | @ | - | @ | | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | . @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | 78 @ | - | @ | 0.75 | @ | - @ | 0.05 | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 1.6 | @ | - | @ | - | @ | 0.21 @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477506 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477507 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 477507 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | 130 | | 546 | | 284 @ | • | @ | | @ | 0.01 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.03 @ |
| 7024070 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | | _ | 378 | | 68 @ | • | @ | | @ | 0.08 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.16 @ |
| 7024070 | | | 740 | _ | 434 @ | - | @ | | @ | 0.06 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.09 @ |
| 7024070 | 112 | _ | 370 | | 72 @ | - | @ | | @ | 0.12 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.21 @ |
| 7024070 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | 103 | | 364 | _ | 26 @ | • | @ | | @ | 0.28 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.21 @ |
| 7024070 | - | @ | - | @ | - @ | • | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | | | 436 | | 178 @ | • | @ | | @ | 0.48 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.09 @ |
| 7024070 | | @ | - | @ | - @ | • | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | 59 | _ | 218 | | 72 @ | - | @ | | @ | 0.02 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.05 @ |
| 7024070 | | @ | - 470 | @ | - @ | • | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | 77 | | 470 | | 242 @ | - | @ | | @ | - @ | 0.03 | _ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.07 @ |
| 7024070 7024070 | 102 | @ | 724 | @ | - @ 512 @ | - | @ | | @ | () | - | @ | - | @ | - | @ | - | @ | - | @ | - @ - @ | - | @ | - | @ | - | @ | - | @ | 0.49 @ |
| 7024070 | 102 | @ | 734 | @ | - @ | - | @ | | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | - | @ | - | @ | - @ | - | @ | | @ | - @ - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 7024070 | 112 | | 258 | | 32 @ | - | @ | | @ | 0.03 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 0.04 @ |
| 7024070 | 112 | @ | - 236 | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 5600 | + - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ |
| 5602 | 1 - | @ | - | @ | 1 K | - | @ | | @ | - @ | - | @ | - | @ | - | @ | _ | @ | - | @ | - @ | - | @ | - | @ | _ | @ | - | @ | - @ |
| 360019089484301 | 374 | @ | | @ | - @ | | @ | | @ | - @ | - | @ | - | @ | - | @ | 0.07 | | | @ | - @ | | @ | _ | @ | _ | @ | | @ | - @ |
| 360019089484301 | - | @ | - | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - 0.07 | @ | | @ | - @ | - | @ | - | @ | | @ | - | @ | - @ |
| 360032089553201 | - | @ | _ | @ | - @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | _ | @ | | @ | 0.05 K | | @ | - | @ | _ | @ | | @ | - @ |
| 360320089522001 | 266 | @ | - | @ | - @ | | @ | | @ | - @ | - | @ | _ | @ | _ | @ | 0 | @ | - | @ | - @ | - | @ | _ | @ | _ | @ | _ | @ | - @ |
| 360526089440601 | - | @ | _ | @ | - @ | _ | @ | | @ | - @ | - | @ | _ | @ | - | @ | - | @ | _ | @ | 0.05 K | _ | @ | - | @ | _ | @ | _ | @ | - @ |
| 550020003 11 0001 | 1 | ۳ | | ۳ | 8 | | ٣ | | 9 | 9 | | ۳ | | ۳ | | 9 | | ۳ | | ٣ | 0.00 11 | | ۳ | | ٣ | | ۳ | | ۳ | 8 |

| Station | 410 | | 500 | | 530 | 6 | 00 | 605 | | 608 | 3 | 610 | | 612 | | 615 | | 618 | | 619 |) | 620 | 625 | 5 | 630 |) | 631 | 1 | 635 | | 665 | П |
|-----------------|-----|---|-----|---|-----|----------|--------|-------|---|-----|---|-----|---|-----|---|-----|-----|------|---|-----|---|--------|-----|---|-----|---|-----|---|-----|---|-----|---|
| 360949089435001 | 388 | @ | - | @ | - @ | ! - | @ |) - | @ | - | @ | - | @ | - | @ | - | @ | 0.07 | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 360949089435001 | - | @ | - | @ | - @ | ! - | (a | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 360949089435001 | 340 | @ | - | @ | - @ | ! - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 361030089425001 | 80 | | - | @ | - @ | ! - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | - | - | @ |
| 361030089425001 | 59 | | - | @ | - @ | ! - | (a | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 361130089394001 | 66 | | - | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | - | @ | 0.09 | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 361140089392903 | - | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 361140089393001 | 69 | | _ | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | _ | @ | 0.07 | _ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 361140089393101 | 70 | | _ | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | _ | @ | 0.18 | - | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 361242089390401 | - | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 361415089450201 | 213 | @ | _ | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | _ | @ | - | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 361415089450201 | 215 | _ | _ | @ | - @ | _ | @ | | @ | - | @ | - | @ | _ | @ | _ | @ | - | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 361415089450201 | - | @ | _ | @ | - @ | | @ | _ | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 361415089450201 | 221 | @ | - | @ | - @ | _ | @ | | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | _ | @ |
| 361415089450201 | - | @ | _ | @ | - @ | | @ | | @ | _ | @ | _ | @ | _ | @ | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | _ | @ | _ | @ |
| 361415089450201 | 242 | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | _ | @ |
| 361415089450201 | | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | _ | @ |
| 361415089450201 | - | @ | - | @ | - @ | | @ | | @ | _ | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - | @ |
| 361418089444501 | 263 | @ | _ | @ | - @ | | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ (| _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 361425089450701 | | @ | _ | @ | - @ | _ | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | 0 | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 361455089443301 | - | @ | - | @ | - @ | | @ | | @ | _ | @ | - | @ | | @ | _ | @ | - | @ | _ | @ | - @ | | @ | _ | @ | _ | @ | _ | @ | - | @ |
| 361455089443301 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 361455089443301 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | 0.05 K | | @ | _ | @ | _ | @ | | @ | _ | @ |
| 361920089432801 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | 0.05 K | _ | @ | _ | @ | _ | @ | _ | - | _ | @ |
| 361937089343201 | _ | @ | _ | @ | - @ | | @ @ | | @ | _ | @ | - | @ | | @ | _ | @ | _ | @ | _ | @ | - @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362100089422001 | 230 | @ | - | @ | - @ | _ | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | 0 | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 362252089420201 | - | @ | _ | @ | - @ | | @ | | @ | _ | @ | | @ | _ | @ | _ | @ | - | @ | _ | @ | 0.05 K | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362338089364401 | _ | @ | _ | @ | - @ | _ | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362341089365701 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362355089364801 | _ | @ | | @ | - @ | | @ | | @ | _ | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | - @ | | @ | _ | @ | _ | @ | | @ | _ | @ |
| 362356089364001 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362406089365401 | _ | @ | _ | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | _ | @ | - | @ | - | @ | _ | @ | _ | @ |
| 362408089364301 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 362419089365201 | - | @ | - | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 362440089334801 | - | @ | - | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 362527089421101 | - | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 362527089421101 | 236 | @ | - | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | - | @ | 0.23 | - | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 362527089421101 | - | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | _ | @ |
| 362528089414301 | - | @ | - | @ | - @ | _ | @ | _ | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | _ | @ |
| 362528089414301 | - | @ | - | @ | - @ | | @ | | @ | _ | @ | - | @ | _ | @ | - | @ (| _ | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - | @ |
| 362530089414001 | 255 | @ | _ | @ | - @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ (| 0.25 | - | _ | @ | - @ | _ | @ | - | @ | - | @ | _ | @ | _ | @ |
| 362640089295301 | - | @ | | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - @ | | @ | - | @ | - | @ | | @ | - | @ |
| 362718089361101 | - | @ | - | @ | - @ | _ | @ | | @ | _ | @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | 0.05 K | _ | @ | - | @ | - | @ | - | @ | - | @ |
| 362955089293301 | _ | @ | _ | @ | - @ | | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 363039089240901 | _ | @ | | @ | - @ | _ | @ | | @ | - | @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - @ | - | @ | - | @ | _ | @ | | @ | - | @ |
| 363107089363401 | _ | @ | - | @ | - @ | | @ | | @ | - | @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 363107089363401 | 119 | @ | - | @ | - @ | _ | @ @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ | - @ | - | @ | - | @ | | @ | | @ | - | @ |
| 363107089363401 | 114 | _ | - | @ | - @ | _ | @ @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - @ | | @ | _ | @ | - | @ | | @ | - | @ |
| 303107003303401 | 114 | w | - | w | - @ | <u> </u> | u | . [- | w | - | w | - | w | - | w | - | Y) | | w | - | w | - (4) | - | w | - | w | | w | - | w | | w |

| | 15 @ | | | | | 600 | | 605 | | 608 | 1 1 | 610 | | 612 | | 615 | | 618 | 619 |) | 620 | | 625 | | 630 | | 631 | | 635 | | 665 | |
|--------------------|------|-----|---|-------|---|-----|---|------|---|-----|-----|------|---|-----|---|-----|---|--------|-----|---|-----|---|-----|---|------|----------|-----|---|-----|---|------|-----|
| 363107089363401 11 | 13 6 | - 1 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| | 15 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u>a</u> | - | @ | - | @ | - | @ |
| 363107089363401 11 | 14 @ | | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | - (| @ | - | @ | - | @ | - | @ |
| 363107089363401 12 | 22 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363107089363401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363107089363401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363107089363401 11 | 15 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | 0.1 | K | - | @ | - | @ |
| 363107089363401 11 | 18 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363126089291501 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363130089370001 11 | 16 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0 @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363157089291701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363200089350001 19 | 98 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0.05 @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363219089310701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 363447089173401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363500089320001 13 | 35 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0 @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363517089124501 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0 @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363523089361001 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363523089361001 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363659089142801 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0.68 @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 363827089172701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 363827089172701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363827089172701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 363830089173501 32 | 24 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0.68 @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 363840089170001 41 | 15 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 0.07 @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364055089103201 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 5.4 | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 364222089243401 - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364224089273301 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 364240089313201 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364247089273401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364331089123701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | 1.5 | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364424089151701 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364453089282401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364453089282401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 364453089282401 - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | 22 | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| W47371 - | @ | - | @ | 7 | @ | - | @ | 0.07 | @ | - | @ | 0.19 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.03 | @ | - | @ | - | @ | - | @ |
| W47371 - | @ | - | @ | 6 | @ | - | @ | 0.12 | @ | - | @ | 0.08 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.02 | @ | - | @ | - | @ | 0.12 | @ |
| W47372 - | @ | | @ | 25 | @ | - | @ | | | - | @ | 0.1 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.03 | @ | - | @ | - | @ | 0.27 | |
| W47372 - | @ | - | @ | 38 | @ | - | @ | 0.69 | @ | - | @ | 0.16 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.07 | @ | - | @ | - | @ | 0.44 | . @ |
| W47373 - | @ | - | @ | 38 | @ | - | @ | 1.7 | @ | - | @ | 1.48 | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.04 | @ | - | @ | - | @ | 1.2 | @ |
| W47373 - | @ | - | @ | 24 | @ | - | @ | 2.8 | @ | - | @ | 1.1 | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | 0.08 | @ | - | @ | - | @ | 1.9 | _ |
| 2363 - | @ | - | @ | 46 | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u>a</u> | - | @ | - | @ | - | @ |
| 2363 - | @ | - | @ | 48 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| <u> </u> | - | @ | - | @ | - | @ |
| 2363 - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 2363 - | @ | | @ | 48 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | - (| @ | - | @ | - | @ | - | @ |
| 5601 - | @ | | @ | 12000 | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | | <u>a</u> | - | @ | - | @ | - | @ |
| 989 - | @ | | @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - | @ | - | @ | - | @ |
| 989 - | @ | | @ | 680 | @ | - | @ | - | @ | - | @ | 4.4 | @ | - | @ | - | @ | - @ | - | @ | - | @ | 4.5 | @ | - (| @ | - | @ | - | @ | 5.3 | @ |
| 989 - | @ | | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | | <u>a</u> | - | @ | - | @ | - | @ |

| Station | 410 | | 500 | 530 |) | 600 | 605 | 608 | | 610 | (| 612 | 615 | 618 | | 619 | | 620 | 625 | | 630 | 631 | | 63 | 5 | 665 |
|---------|-----|---|-----|-----|-----|-----|-----|-----|---|--------|-----|-----|-----|-------|---|-----|---|-----|-----|---|-------|-----|-----|----|---|-------|
| 989 | - | @ | - @ | 19 | 6 @ | - @ | - @ | - | @ | 7.9 @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | 7.6 @ |
| 989 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 989 | - | @ | - @ | 183 | 3 @ | - @ | - @ | - | @ | 4.2 @ | - | @ | - @ | - | @ | - | @ | - @ | 4.7 | @ | - @ | - | @ | - | @ | 5.6 @ |
| 990 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 990 | - | @ | - @ | 133 | 3 @ | - @ | - @ | - | @ | 7 @ | | @ | - @ | - | @ | - | @ | - @ | 8.2 | @ | - @ | - | @ | - | @ | 6.3 @ |
| 990 | - | @ | - @ | 5 | | - @ | - @ | - | @ | 8.6 @ | | @ | - @ | | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | 7.3 @ |
| 990 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 990 | - | @ | - @ | 17 | 7 @ | - @ | - @ | - | @ | 6.4 @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | 5.9 @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | 0.4 K | - | @ | - @ | - | @ | - | @ | - @ | 0.5 | @ | 0.9 @ | - | @ | - | @ | 56 @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2353 | - | @ | - @ | - | @ | - @ | - @ | - | @ | 0.4 @ | - | @ | - @ | - | @ | - | @ | - @ | 0.4 | @ | 0.2 K | - | @ | - | @ | 165 @ |
| 2357 | - | @ | - @ | 34 | 4 @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2357 | - | @ | - @ | 10 | 0 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2358 | - | @ | - @ | 2 | 7 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2358 | - | @ | - @ | 50 | 0 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2359 | - | @ | - @ | 48 | 3 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | 0.5 | @ | - @ | - | @ | - | @ | 0.2 @ |
| 2359 | - | @ | - @ | 48 | 3 @ | - @ | - @ | - | @ | 0.4 K | - | @ | - @ | - | @ | - | @ | - @ | 0.4 | K | 0.3 @ | - | @ | - | @ | 0.5 @ |
| 2359 | - | @ | - @ | 49 | 9 @ | - @ | - @ | - | @ | 0.4 K | - | @ | - @ | - | @ | - | @ | - @ | 0.4 | K | 0.4 @ | - | @ | - | @ | 0.4 @ |
| 2360 | - | @ | - @ | 39 | 9 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2360 | - | @ | - @ | 18 | 3 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2361 | - | @ | - @ | | 3 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2361 | - | @ | - @ | | 3 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2361 | - | @ | - @ | , | 5 @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 94 | 4 @ | - @ | - @ | - | @ | 0.39 @ | - | @ | - @ | - | @ | - | @ | - @ | 1.9 | @ | 5 @ | - | @ | - | @ | 0.2 @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 1 | 7 @ | - @ | - @ | | @ | 0.6 @ | - | @ | - @ | - | @ | - | @ | - @ | 2 | @ | 5.3 @ | - | @ | - | @ | 0.6 @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 5 | 1 @ | - @ | - @ | - | @ | 0.4 K | - | @ | - @ | - | @ | - | @ | - @ | 1 | @ | 3.8 @ | - | @ | - | @ | 1.2 @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 9 | 4 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | 1 | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 6 | 0 @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 6 | 3 @ | - @ | - @ | - | @ | - @ | ! - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | 99 | 9 @ | - @ | - @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2365 | - | @ | - @ | : | 2@ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2468 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | | | - @ | | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2468 | - | @ | - @ | | 5 @ | - @ | - @ | - | @ | 4.3 @ | | @ | - @ | - | @ | - | @ | - @ | 6.1 | @ | - @ | - | @ | - | @ | 3.4 @ |
| 2468 | - | @ | - @ | - | @ | - @ | - @ | 1 | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2468 | - | @ | - @ | | 9 @ | - @ | - @ | - | @ | 3.8 @ | | @ | - @ | - | @ | - | @ | - @ | 6.8 | @ | 33 @ | - | @ | - | @ | 2.1 @ |
| 2468 | - | @ | - @ | l - | @ | - @ | - @ | - | @ | - @ | | @ | - @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2468 | - | @ | - @ | | 4 @ | - @ | - @ | - | @ | 3.3 @ | | @ | - @ | - | @ | - | @ | - @ | 6.1 | @ | 37 @ | - | @ | - | @ | 1.6 @ |
| 2468 | - | @ | - @ | | 5 @ | - @ | - @ | - | @ | - @ | ! - | @ | - @ | | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - @ |
| 2468 | - | @ | - @ | - | @ | - @ | - @ | - | @ | - @ | - | @ | - @ | 1 - 1 | @ | - | @ | - @ | - | @ | - @ | - | (0) | - | @ | - @ |

| Station | | 410 | | 500 |) | 530 | | 600 |) | 605 | | 608 | 3 | 610 |) | 612 | | 615 | | 618 | 6 | 19 | 62 | 0 | 625 | | 630 | | 631 | \neg | 635 | | 665 | |
|-----------|------|-----|---|-----|---|--------|---|-----|---|-------|---|-----|---|-------|-----|-----|---|-----|---|-----|---|----|----|---|-----|---|--------|---|-----|--------|------|------------|-------|---|
| | 2468 | - | @ | - | @ | 15 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (0 | <u>)</u> - | | @ |
| | 2468 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | | @ | - (| @ - | - (0 | 0 - | | @ |
| | 2468 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | | @ |
| | 2468 | - | @ | - | @ | 5 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (0 | 0 - | - | @ |
| | 2468 | - | @ | - | @ | 60 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | | @ |
| | 2468 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (0 | <u>)</u> - | - | @ |
| | 2468 | - | @ | - | @ | 23 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | - | @ |
| | 2468 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | - | @ |
| MO0001171 | | - | @ | - | @ | 1 | @ | - | @ | 1 | @ | - | @ | | 1 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1 (| @ | - (| @ - | - (| 0 | 1 | @ |
| MO0001171 | | - | @ | - | @ | 97 | @ | - | @ | 1 | K | - | @ | 0. | 1 K | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1.5 | @ | - (| @ - | - @ | 0 | 0.37 | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - @ | 0 - | - | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - @ | 0 - | - | @ |
| MO0001171 | | - | @ | - | @ | 381302 | @ | - | @ | 3931 | K | - | @ | 393. | 1 K | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 5896.4 | @ | - (| @ - | - @ | 0 1 | 454.5 | @ |
| MO0001171 | | - | @ | - | @ | 1 | @ | - | @ | - | @ | - | @ | | 1 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1 | @ | - (| @ - | - @ | <u> </u> | | @ |
| MO0001171 | | - | @ | - | @ | 8 | @ | - | @ | - | @ | - | @ | 0.3 | 3 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1.22 | @ | - (| @ - | - (| 9 - | - | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | - | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - @ | <u>)</u> - | - | @ |
| MO0001171 | | - | @ | - | @ | 1250 | @ | - | @ | - | @ | - | @ | 46.9 | 9 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 190.6 | @ | - (| @ - | - (| 9 - | - | @ |
| MO0001171 | | - | @ | - | @ | 1 | @ | - | @ | 1 | @ | - | @ | | 1 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1 (| @ | - (| @ - | - (| 0 | 1 | @ |
| MO0001171 | | - | @ | - | @ | 96 | @ | - | @ | 1 | K | - | @ | 0. | 1 K | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 1.64 | @ | - (| @ - | - @ | 0 | 0.07 | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - @ | 0 - | | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | - | @ |
| MO0001171 | | - | @ | - | @ | 231139 | @ | - | @ | 156.2 | | - | @ | 240.8 | 3 K | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 3948.6 | @ | - (| @ - | - (| 0 | 10.9 | |
| MO0001171 | | - | @ | - | @ | 1 |) | - | @ | | @ | - | @ | | 1 @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | | @ | - (| @ - | - (| 0 | | @ |
| MO0001171 | | - | @ | - | @ | 86 | @ | - | @ | 1 | K | - | @ | | 1 K | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | 0.53 | @ | - (| @ - | - @ | | 0.05 | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | | @ | - (| @ - | - @ | _ | | @ |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - (| @ - | - @ | | | @ |
| MO0001171 | | - | @ | - | @ | 31 | _ | - | @ | 0.4 | | - | @ | 0.4 | 1 K | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | | @ - | - @ | | 0.02 | |
| | 988 | - | @ | - | @ | 600 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - (| @ | - (| @ - | - @ | _ | • | @ |
| | 988 | - | @ | - | @ | 808 | _ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | | @ | | @ - | | <u>)</u> - | | @ |
| | 988 | - | @ | - | @ | 540 | _ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | | @ - | - @ | | • | @ |
| | 2354 | - | @ | - | @ | 48 | _ | - | @ | - | @ | - | @ | 0. | _ | - | @ | - | @ | - @ | _ | @ | - | @ | 1.7 | | | @ | - (| @ - | - @ | _ | 2.8 | |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | | @ | | @ - | | <u>)</u> - | | @ |
| | 2354 | - | @ | - | @ | 58 | _ | - | @ | - | @ | - | @ | 0.4 | | - | @ | - | @ | - @ | | @ | - | @ | 2 | @ | 0.2 ł | _ | | @ - | - @ | _ | 3.6 | |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | | @ - | - (| | • | @ |
| | 2354 | - | @ | - | @ | 52 | _ | - | @ | - | @ | - | @ | 0.4 | _ | - | @ | - | @ | - @ | _ | @ | - | @ | 1.4 | _ | 0.1 l | < | | @ - | - (| _ | 2.6 | |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | | @ - | - (| _ | • | @ |
| | 8538 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | | @ - | - (| | • | @ |
| | 8538 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - (| @ | - (| @ - | - (| <u>)</u> - | - | @ |

| Table B1. | Databass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|----------|-----|----|-----|---|---|-------|-----|-----|------|-----|---|-----|---|------|---|------|---|-------|---|-------|---|-------|---|-------|---|-------|----|-------|---|-------|--|
| Station | Databast | 666 | | 671 | | | 680 | 681 | | 685 | 687 | | 690 | | 1045 | | 1046 | | 39530 | | 39540 | | 39570 | | 39600 | | 39601 | | 39630 |) | 39730 | 39740 |
| Otation | 8798 | - | @ | - | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2752 | - | @ | | @ | - | @ | | @ | - @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - | @ | - | @ | _ | @ | | @ | | @ | | <u> </u> |
| | 8730 | | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | - | @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | | @ | _ | @ | | <u> </u> |
| | 8730 | _ | () | - | @ | _ | @ | _ | @ | - @ | - | @ | _ | @ | _ | @ | - | @ | - | @ | _ | @ | _ | @ | - | @ | | () | - | @ | | <u> </u> |
| | 2356 | | @ | - | @ | - | @ | | @ | - @ | | @ | - | @ | | @ | - | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>. </u> |
| | 2356 | | @ | - | @ | - | @ | | @ | - @ | - | @ | _ | @ | | @ | - | @ | - | @ | | @ | | @ | _ | @ | | @ | - | @ | | <u> </u> |
| | 2356 | | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2356 | | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>. </u> |
| | 2469 | | @ | - | @ | - | @ | - | @ | - @ | - | @ | _ | @ | | @ | _ | @ | - | @ | | @ | _ | @ | _ | @ | | @ | - | @ | | <u> </u> |
| | 2469 | | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | | @ | - | @ | - | @ | | @ | - @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>. </u> |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>. </u> |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>.</u> 0 - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>.</u> 0 - |
| | 2469 | - | | | @ | | | | @ | | | | - | | | @ | | | | @ | | @ | | | - | | | @ | | | | |
| — | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | | @ | - | @ | | @ - @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | <u>u</u> - @ - |
| | 2469 | - | | | | | | | @ | | | _ | - | | | @ | | | | @ | | _ | | | | @ | | @ | | | | |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - @ - |
| | | - | @ | - | | - | @ | | | | - | @ | - | @ | - | | | | | _ | - | @ | | | | | | | | @ | | |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | 9 |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 93 | _ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | 63 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 2469 | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | 450 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | | 4 @ | | 2 @ | 43 @ | | @ | - | @ | 1500 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | | 4.2 @ | 4.1 | @ | 35 @ | | @ | - | @ | 930 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210066 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210067 | - | @ | - | @ | - | @ | - | @ | - @ | 38 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210067 | - | @ | - | @ | | 5.2 @ | 4.9 | @ | 77 @ | 45 | | - | @ | 330 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| L | 210068 | - | @ | - | @ | - | @ | - | @ | - @ | 48 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 210068 | - | @ | - | @ | | 4.3 @ | | 1 @ | 73 @ | | K | - | @ | 120 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | | 3.6 @ | | 0 | 33 @ | | @ | - | @ | 1400 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | | 3.5 @ | | 6 @ | 25 @ | - | @ | - | @ | 1600 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ - |
| | 477504 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | | @ - |
| | 477505 | - | @ | - | @ | | 3.8 @ | 3.9 | @ | 40 @ | 23 | | - | @ | 520 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ - |
| | 477505 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ - |
| | 477505 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ - |
| 1 | 477505 | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - (| @ - |

| Station 6 | 666 | | 671 | | 680 | | 681 | 685 | : | 687 | 690 | 1045 | | 1046 | | 39530 | | 39540 | | 39570 | 39600 | 30 | 601 | \neg | 39630 | | 39730 | 39740 |
|----------------------|-----|---|-----|---|-------|---|-------|-----|---|------|------|------|--------|------|---|-------|---|-------|---|--------|-------|-----|-----|--------|-------|---|-------|-------|
| 477505 - | | @ | | @ | - 000 | @ | - @ | | @ | - @ | - @ | | | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477505 - | | @ | | @ | 3.4 | | 4.1 @ | | @ | 25 @ | - @ | | | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| | | @ | | @ | 3.4 | @ | - @ | | @ | - @ | - @ | | _ | | @ | - | | - | @ | - @ | | @ - | | _ | | @ | | @ - |
| 477505 - 477505 - | | @ | | @ | _ | _ | - @ | | @ | | | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | _ | | |
| | | | | | - | @ | | _ | _ | - @ | | | _ | | | - | | - | | | | _ | | _ | | @ | | @ - |
| 477505 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477505 - | | @ | | @ | - 25 | @ | - @ | | @ | - @ | 6 | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | 3.5 | _ | 3.6 @ | | @ | 8 @ | - @ | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | • | _ | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | _ | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | _ | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | _ | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | | @ | - @ | - @ | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | | @ | - @ | - @ | | • | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | 3.5 | | 3.6 @ | _ | @ | 52 @ | - @ | | _ | _ | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | | \sim | - | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | - | @ | - | @ | - @ | | @ | - @ | - @ | | _ | - | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | 9 | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477506 - | | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | _ | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477507 - | | @ | - | @ | - | @ | - @ | | @ | 39 @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 477507 - | - | @ | - | @ | - | @ | - @ | - | @ | 55 @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | | @ | - @ | - | @ - | | @ | - | @ | - | . @ |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | | @ | - @ | - | @ - | | @ | - | @ | - | . @ |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | | @ | - @ | - | @ - | | @ | - | @ | - | . @ |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | | @ | | @ | - @ | - | @ - | | @ | - | @ | - | . @ |
| 7024070 - | - | @ | - | @ | = | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | | @ | - | @ | - | @ | - @ | _ | @ | - @ | - @ | - | | - | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | | - | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | - | @ - |
| 7024070 - | | @ | | @ | - | @ | - @ | | @ | - @ | - @ | | - | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 7024070 - | - | @ | - | @ | - | @ | - @ | - | @ | - @ | - @ | - | _ | - | @ | - | @ | - | @ | - @ | - | @ - | | @ | - | @ | - | @ - |
| 7024070 - | _ | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | _ | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 5600 - | _ | @ | | @ | - | @ | - @ | | @ | - @ | - @ | | - | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 5602 - | _ | @ | | @ | - | @ | - @ | _ | @ | - @ | - @ | | _ | | @ | - | @ | - | @ | - @ | | @ - | | @ | - | @ | | @ - |
| 360019089484301 - | | @ | | @ | _ | @ | - @ | | @ | - @ | - @ | | _ | | @ | _ | @ | _ | @ | - @ | | @ - | | @ | _ | @ | | @ - |
| 360019089484301 - | | @ | | @ | _ | @ | - @ | _ | @ | - @ | - @ | | _ | _ | @ | _ | @ | _ | @ | - @ | | @ - | | @ | _ | @ | | @ - |
| 360032089553201 - | _ | @ | | @ | _ | @ | - @ | _ | @ | - @ | - @ | | | | @ | 0.05 | | - | @ | 0.05 K | 0.05 | | | @ | 0.5 | _ | 0.01 | _ |
| | | _ | | _ | | (| | | _ | _ | | | _ | | _ | | _ | | | | | _ | | _ | | | | |
| 360320089522001 - | - 1 | @ | - | @ | - | @ | - @ | - | @ | - @ | - l@ | 1 | @ | - | @ | - | @ | - | @ | - @ | - 1 | @ - | 1 | @ | - | @ | - 1 | @ - |

| Station | 666 | | 671 | | 680 | | 681 | 6 | 85 | | 687 | | 690 | | 1045 | 1046 | | 39530 | | 39540 | | 39570 | 39600 | 3960 | 1 | 39630 |) | 39730 | 1 | 39740 |
|------------------------------------|-----|---|-----|---|-----|---|-----|------------|----|---|-----|----------------|-----|---|---------|-------|---|-------|---|-------|---|--------|--------|------|---|-------|---|-------|---|-------|
| 360949089435001 | - | @ | - | @ | - | @ | | 0 - | | @ | | 20 | | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 360949089435001 | | @ | _ | @ | _ | @ | | 0 - | | @ | | <u>2</u> | | @ | 13 @ | _ | @ | _ | @ | _ | @ | - @ | | | @ | - | @ | | @ | _ |
| 360949089435001 | | @ | - | @ | _ | @ | | 0 - | _ | @ | | 2) 2) | | @ | 7000 @ | - | @ | _ | @ | _ | @ | - @ | | | @ | _ | @ | | @ | |
| 361030089425001 | _ | @ | - | @ | _ | @ | | 0 - | _ | @ | | <u>2</u> | | @ | 340 @ | - | @ | - | @ | _ | @ | - @ | | | @ | _ | @ | | @ | |
| 361030089425001 | _ | @ | - | @ | _ | @ | | <u> </u> | _ | @ | | <u>2</u> | | @ | 3700 @ | - | @ | - | @ | _ | @ | - @ | | | @ | - | @ | | @ | - |
| 361130089394001 | - | @ | | @ | - | @ | | 0 - | _ | @ | _ | <u>2</u> 20 | | @ | - @ | - | @ | - | @ | - | @ | - @ | | _ | @ | - | @ | | @ | |
| 361140089394001 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>2</u> | | @ | 5 @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| | - | @ | - | @ | - | _ | | | | @ | | _ | | _ | | - | @ | - | @ | - | @ | - @ | | | @ | - | | | | |
| 361140089393001 361140089393101 | - | @ | - | @ | - | @ | | Q - Q - | _ | @ | | <u>0</u> | | @ | - @ | | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361140089393101 | - | @ | - | @ | - | @ | | <u> </u> | | @ | | <u>D</u> | | @ | - @ | 700 | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | |
| | - | | | @ | - | _ | | | _ | | | _ | | _ | - @ | 600 | _ | - | | - | | | | _ | | | | | | |
| 361415089450201 | - | @ | - | (| - | @ | | 0 - | _ | @ | | <u>0</u> | | @ | _ | - 600 | @ | - | @ | - | @ | - @ | _ | | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | | @ | - | @ | | > | | @ | | <u>0</u> | | @ | 200 @ | | @ | - | @ | | @ | • | | | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | 9 - | _ | @ | | <u>0</u> | | @ | 0.2 @ | - | @ | - | @ | - | @ | - @ | | _ | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>0</u> | | @ | 100 @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | , | _ | @ | | <u>0</u> | | @ | 0 @ | | @ | - | @ | - | @ | • | | | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | 9 - | _ | @ | | <u>0</u> | | @ | - @ | 54 | @ | - | @ | - | @ | - @ | | _ | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | - @ | 48 | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361415089450201 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>0</u> | | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361418089444501 | - | @ | - | @ | - | @ | | 9 - | | @ | | <u>0</u> | | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361425089450701 | - | @ | - | @ | - | @ | | 9 - | _ | @ | | 20 | | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 361455089443301 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>0</u> | | @ | - @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 K | | @ | 0.5 | | 0.01 | | 0.01 |
| 361455089443301 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>0</u> | | @ | - @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 K | _ | @ | 0.5 | | 0.01 | | 0.01 |
| 361455089443301 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | 13300 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 361920089432801 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | 20 | | @ | - @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 K | _ | @ | 0.5 | _ | 0.01 | | 0.01 |
| 361937089343201 | - | @ | | @ | - | @ | | 0 - | _ | @ | | 20 | | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362100089422001 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ | _ | @ | - | @ | | @ | - |
| 362252089420201 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | 2080 @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 K | | @ | 0.5 | | 0.01 | | 0.01 |
| 362338089364401 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | 20 | | @ | 9 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362341089365701 | - | @ | - | @ | - | @ | | 2 - | _ | @ | | 20 | | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362355089364801 | - | @ | - | @ | - | @ | - (| _ | _ | @ | | <u>D</u> | | @ | 5 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362356089364001 | - | @ | - | @ | - | @ | | 0 - | | @ | | <u>D</u> | | @ | 8 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362406089365401 | - | @ | - | @ | - | @ | | 2 - | _ | @ | | <u>D</u> | | @ | 7 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362408089364301 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | 8 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362419089365201 | - | @ | - | @ | - | @ | | 2 - | | @ | | <u>D</u> | | @ | 9 @ | - | @ | - | @ | - | @ | - @ | - @ | | @ | - | @ | | @ | - |
| 362440089334801 | - | @ | - | @ | - | @ | - (| _ | _ | @ | | <u>D</u> | | @ | 0.6 @ | - | @ | - | @ | - | @ | - @ | - @ | _ | @ | - | @ | | @ | - |
| 362527089421101 | - | @ | - | @ | - | @ | | 0 - | _ | @ | | <u>D</u> | | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 362527089421101 | - | @ | - | @ | - | @ | | 0 - | _ | @ | - (| 20 | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 362527089421101 | - | @ | - | @ | - | @ | - (| <u> </u> | | @ | - (| 20 | - | @ | 4 @ | - | @ | - | @ | - | @ | - @ | | _ | @ | - | @ | | @ | - |
| 362528089414301 | - | @ | - | @ | - | @ | - (| <u> </u> | | @ | - (| 20 | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | | @ | - |
| 362528089414301 | - | @ | - | @ | - | @ | - (| <u> </u> | | @ | - (| 20 | - | @ | 3 @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | - | @ | - |
| 362530089414001 | - | @ | - | @ | - | @ | - (| <u> </u> | | @ | - (| <u>D</u> | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ |] - | @ | - | @ | | @ | - |
| 362640089295301 | - | @ | - | @ | - | @ | - (| 0 - | | @ | - (| <u>D</u> | - | @ | - @ | 450 | @ | - | @ | - | @ | - @ | - @ |] - | @ | - | @ | - | @ | - |
| 362718089361101 | - | @ | - | @ | - | @ | - (| 9 - | | @ | - (| <u>D</u> | - | @ | - @ | - | @ | 0.05 | K | - | @ | 0.05 K | 0.05 K | - | @ | 0.5 | K | 0.01 | K | 0.01 |
| 362955089293301 | - | @ | - | @ | - | @ | - (| <u> </u> | | @ | - (| <u>D</u> | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ |) - | @ | - | @ | - | @ | -] |
| 363039089240901 | - | @ | 1 | @ | - | @ | - (| 9 - | | @ | - (| 2) | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - |
| 363107089363401 | - | @ | • | @ | - | @ | - (| 9 - | | @ | - (| <u>D</u> | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - @ |) - | @ | - | @ | - | @ | - |
| 363107089363401 | - | @ | • | @ | - | @ | - (| 0 - | | @ | - | <u>D</u> | - | @ | 1100 @ | - | @ | - | @ | - | @ | - @ | - @ |) - | @ | - | @ | - | @ | - |
| 363107089363401 | • | @ | • | @ | - | @ | - (| 0 - | | @ | - | <u>D</u> | - | @ | 2000 @ | - | @ | - | @ | - | @ | - @ | - @ | - | @ | - | @ | - | @ | - |

| Station | 666 | : | 671 | | 680 | | 681 | 685 | : | 687 | | 690 | | 1045 | 1046 | | 39530 | | 39540 | | 39570 | 39600 | 1 | 39601 | | 39630 | | 39730 | | 39740 |
|-----------------|--------|---|-----|---|-----|---|-----|-----|---|-----|---|-----|---|---------|------|---|-------|---|-------|---|--------|--------|---|-------|---|-------|---|---------|---|---------|
| 363107089363401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 600 @ | - | @ | - | @ | - | @ | - @ | | | - | @ | - | @ | - 33730 | @ | - 33140 |
| 363107089363401 | | @ | _ | @ | _ | @ | - @ | | @ | _ | @ | _ | @ | 1300 @ | - | @ | _ | @ | _ | @ | - @ | | _ | - | @ | | @ | | @ | |
| 363107089363401 | | @ | | @ | _ | @ | - @ | _ | @ | | @ | - | @ | 3000 @ | - | @ | - | @ | - | @ | - @ | | - | - | @ | - | @ | | @ | |
| 363107089363401 | - | @ | - | @ | - | @ | - @ | | @ | | @ | - | @ | 700 @ | - | @ | - | @ | - | @ | - @ | | | - | @ | - | @ | | @ | - |
| 363107089363401 | - | @ | - | @ | _ | @ | - @ | | @ | | @ | - | @ | 0.6 @ | - | @ | - | @ | - | @ | - @ | | _ | - | @ | - | @ | | @ | |
| | - | _ | - | _ | - | @ | - @ | _ | @ | - | @ | - | @ | 6 @ | | @ | - | @ | - | @ | | | _ | - | | - | @ | - | @ | - |
| 363107089363401 | - 0.01 | @ | - | @ | - | @ | - @ | | | - | | - | _ | | 990 | @ | - | | - | _ | • | | _ | - | @ | - | | - | @ | - |
| 363107089363401 | 0.01 | _ | | @ | | _ | | | @ | - | @ | | @ | - @ | | _ | - | @ | | @ | • | | • | | @ | | @ | | | - |
| 363107089363401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | 250 | @ | - | @ | - | @ | - @ | | 9 | - | @ | - | @ | - | @ | - |
| 363126089291501 | - | @ | - | @ | | @ | 9 | | @ | - | @ | - | @ | • | - | @ | - | @ | - | @ | • | | • | - | @ | - | @ | - | @ | - |
| 363130089370001 | - | @ | | @ | - | _ | | | @ | - | | | @ | • | | @ | - | @ | | @ | • | | • | | @ | | | | | - |
| 363157089291701 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | - | @ | - |
| 363200089350001 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | • | - | @ | - | @ | - | @ | - |
| 363219089310701 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | | @ | - |
| 363447089173401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | 9 | - | @ | - | @ | - | @ | - |
| 363500089320001 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 363517089124501 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | - | @ | - |
| 363523089361001 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 3 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 363523089361001 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 0 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 363659089142801 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | 9 | - | @ | - | @ | - | @ | - |
| 363827089172701 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 16 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 363827089172701 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 19 @ | - | @ | - | @ | - | @ | - @ | | _ | - | @ | - | @ | - | @ | - |
| 363827089172701 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | 0.8 @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 363830089173501 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 363840089170001 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | | @ | |
| 364055089103201 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | 80 @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 l | | - | @ | 0.5 | | 0.01 | | 0.01 |
| 364222089243401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 0.3 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 364224089273301 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | 8 @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | - | @ | - |
| 364240089313201 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 3 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 364247089273401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 8 @ | - | @ | - | @ | - | @ | - @ | | ~ | - | @ | - | @ | - | @ | - |
| 364331089123701 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | 130 @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 l | | - | @ | 0.5 | _ | 0.01 | | 0.01 |
| 364424089151701 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 13 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | | @ | - |
| 364453089282401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 | _ | - | @ | 0.5 | _ | 0.01 | | 0.01 |
| 364453089282401 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | 0.05 | | - | @ | 0.05 K | 0.05 l | | - | @ | 0.5 | _ | 0.01 | | 0.01 |
| 364453089282401 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | 50 K | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | | @ | - |
| W47371 | - | @ | - | @ | 1.1 | @ | - @ | _ | @ | - | @ | - | @ | 4600 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| W47371 | - | @ | - | @ | 1.4 | _ | - @ | _ | @ | - | @ | - | @ | 3400 @ | - | @ | - | @ | - | @ | - @ | | 9 | - | @ | - | @ | - | @ | - |
| W47372 | - | @ | - | @ | 1.6 | | - @ | | | - | @ | - | @ | 13000 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| W47372 | - | @ | - | @ | 2.1 | @ | - @ | _ | | - | @ | - | @ | 12000 @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | - | @ | - |
| W47373 | - | @ | - | @ | 4.1 | @ | - @ | | | - | @ | - | @ | 18000 @ | - | @ | - | @ | - | @ | - @ | | _ | - | @ | - | @ | - | @ | - |
| W47373 | - | @ | - | @ | 4 | @ | - @ | _ | _ | - | @ | - | @ | 17000 @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 2363 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | 9 | - | @ | - | @ | - | @ | - |
| 2363 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 2363 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | _ | - | @ | - | @ | - | @ | - |
| 2363 | - | @ | - | @ | - | @ | - @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ۳ | - | @ | - | @ | - | @ | - |
| 5601 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | ٥ | - | @ | - | @ | - | @ | - |
| 989 | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | | • | - | @ | - | @ | - | @ | - |
| 989 | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | 550 @ | - | @ | - | @ | - | @ | - @ | - (| @ | - | @ | - | @ | - | @ | - |
| 989 | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - @ | - (| @ | - | @ | - | @ | - | @ | - |

| Station | 666 | 6 | 671 | | 680 | | 681 | 685 | 5 | 687 | | 690 | 1045 | | 1046 | | 39530 | | 39540 | | 39570 | 39600 |) | 39601 | | 39630 | | 39730 | | 39740 |
|---------|-----|---|-----|---|-----|-----|-----|-----|---|-----|---|-----|-------|---------------|------|---------------|-------|---|-------|---------------|-------|-------|---|-------|---|-------|---|-------|---|-------|
| 989 | - | @ | - | @ | - | @ | - @ | | @ | - @ | ! | - @ | 900 | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 989 | _ | @ | - | @ | _ | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | _ | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 989 | - | @ | - | @ | _ | @ | - @ | l - | @ | - @ | | - @ | 910 | | - | @ | - | @ | | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| 990 | _ | @ | - | @ | _ | @ | - @ | - | @ | - @ | _ | - @ | - 010 | @ | - | @ | _ | @ | _ | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| 990 | | @ | - | @ | _ | @ | - @ | _ | @ | - @ | _ | - @ | 1380 | | - | @ | | @ | _ | @ | - @ | | @ | _ | @ | - | @ | | @ | _ |
| 990 | | @ | - | @ | _ | @ | - @ | - | @ | - @ | | - @ | 450 | | - | @ | | @ | | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| 990 | | @ | - | @ | - | @ | - @ | | @ | - @ | _ | - @ | | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| | - | | | @ | | @ | | _ | _ | | _ | | 430 | | | @ | - | | | | | | | | | | | | | |
| 990 | - | @ | - | _ | - | | - @ | | @ | • | _ | - @ | | | - | | - | @ | - | @ | • | | @ | - | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | | @ | - @ | _ | @ | • | | - @ | 1730 | | - | @ | - | @ | - | @ | • | | @ | | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 250 | | - | @ | - | @ | • | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | 400 | | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 680 | | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 210 | | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2353 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 730 | | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2357 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2357 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2358 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | 760 | | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2358 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2359 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | 1000 | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2359 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2359 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2360 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2360 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2361 | _ | @ | - | @ | _ | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | _ | @ | - | @ | - @ | | @ | - | @ | _ | @ | - | @ | _ |
| 2361 | - | @ | - | @ | _ | @ | - @ | - | @ | - @ | _ | - @ | - | @ | - | @ | - | @ | | @ | - @ | | @ | - | @ | _ | @ | _ | @ | _ |
| 2361 | - | @ | - | @ | _ | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | | @ | - @ | | @ | - | @ | _ | @ | _ | @ | _ |
| 2365 | | @ | - | @ | _ | @ | - @ | - | @ | - @ | | - @ | 530 | | - | @ | _ | @ | _ | @ | - @ | | @ | - | @ | - | @ | _ | @ | _ |
| 2365 | | @ | - | @ | _ | @ | - @ | - | @ | - @ | _ | - @ | - 330 | @ | - | @ | | @ | | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| 2365 | | @ | - | @ | _ | @ | - @ | | @ | - @ | _ | - @ | 290 | | - | @ | | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| 2365 | | @ | | @ | _ | @ | - @ | - | @ | - @ | | - @ | 230 | @ | - | @ | | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | _ |
| | - | @ | - | | - | | | | @ | | _ | | 170 | | - | @ | | @ | - | | - @ | | @ | - | @ | - | @ | - | @ | _ |
| 2365 | - | | - | @ | | @ | 9 | | _ | • | _ | • | 170 | | | | - | | | @ | | | | | | | _ | | | |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2365 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 1370 | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | - | @ | - |
| 2468 | | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | ! | - @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | - | @ | - | @ | _ | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | _ | - @ | 40 | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2468 | - | @ | - | @ | - | @ | - @ | - | @ | - @ | | - @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ | - | @ | - | @ | | @ | - |
| 2 100 | | ت | L | ٠ | L | ت ا | | 1 | ۳ | | | 9 | 1 | $\overline{}$ | | $\overline{}$ | | ت | | $\overline{}$ | | 1 | ۳ | | J | | | | _ | ! |

| Station | | 666 | ; | 671 | | 680 | | 681 | ı | 685 | | 687 | | 690 | | 1045 | 1046 | | 39530 | | 39540 | | 39570 | 39600 | | 39601 | 3963 | 10 | 39730 |) | 39740 |
|------------|------|-----|---|-----|---|---------|---|-----|---|-----|---|-----|---|-----|---|----------|----------|---|-------|---|-------|---|-------|-------|---|-------|------|----|-------|---|--------------|
| O LOLLIOTT | 2468 | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | | @ | 25 K | | @ | | @ | | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| | 2468 | | @ | | @ | | @ | | @ | | @ | | @ | | @ | - | 20 - | @ | | @ | _ | @ | - @ | _ | @ | - @ | | @ | _ | @ | — |
| | 2468 | | @ | | @ | | @ | | @ | | @ | | @ | | @ | | <u> </u> | @ | | @ | _ | @ | - @ | _ | @ | - @ | | @ | _ | @ | _ |
| | 2468 | _ | @ | _ | @ | | @ | _ | @ | _ | @ | _ | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| | 2468 | | @ | | @ | | @ | | @ | | @ | _ | @ | | @ | 548 @ | _ | @ | | @ | _ | @ | - @ | _ | @ | - @ | _ | @ | _ | @ | — |
| | 2468 | | @ | | @ | | @ | | @ | _ | @ | _ | @ | | @ | | <u> </u> | @ | | @ | _ | @ | - @ | _ | @ | - @ | _ | @ | _ | @ | _ |
| | 2468 | _ | @ | _ | @ | | @ | _ | @ | _ | @ | - | @ | | @ | 504 @ | _ | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | _ |
| | 2468 | _ | @ | | @ | | @ | _ | @ | _ | @ | _ | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | _ | @ | - @ | _ | @ | _ | @ | _ |
| MO0001171 | 2400 | _ | @ | | @ | | @ | _ | @ | _ | @ | - | @ | | @ | | <u> </u> | @ | | @ | | @ | - @ | _ | @ | - @ | | @ | _ | @ | _ |
| MO0001171 | | _ | @ | _ | @ | 10 | _ | _ | @ | _ | @ | - | @ | | @ | 3700 @ | | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | _ | @ | | @ | | @ | _ | @ | _ | @ | _ | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | _ | @ | - @ | | @ | _ | @ | _ |
| MO0001171 | | - | @ | - | @ | | @ | - | @ | _ | @ | - | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | _ | @ | _ | @ | 39309.5 | _ | _ | @ | _ | @ | _ | @ | | @ | 14545 @ | _ | @ | | @ | _ | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | | @ | - | @ | _ | @ | - | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | _ | @ | _ | @ | 4 | _ | _ | @ | _ | @ | _ | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | | @ | - | @ | _ | @ | - | @ | | @ | | <u> </u> | @ | | @ | - | @ | - @ | - | @ | - @ | _ | @ | - | @ | - |
| MO0001171 | | _ | @ | - | @ | | @ | _ | @ | _ | @ | - | @ | | @ | | <u> </u> | @ | | @ | - | @ | - @ | _ | @ | - @ | | @ | _ | @ | _ |
| MO0001171 | | _ | @ | _ | @ | | @ | _ | @ | _ | @ | - | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | _ | @ | - | @ | | @ | _ | @ | _ | @ | - | @ | | @ | 1 @ | _ | @ | | @ | - | @ | - @ | - | @ | - @ | _ | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | 10 | _ | - | @ | - | @ | - | @ | | @ | 760 @ | | @ | | @ | - | @ | - @ | - | @ | - @ | _ | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | | @ | | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - @ | Q - | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | 24076.9 | _ | - | @ | - | @ | - | @ | | @ | 119 @ | _ | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | 1 | @ | - | @ | - | @ | - | @ | | @ | 1 @ | Q - | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | 1 | K | - | @ | - | @ | - | @ | | @ | 20300 @ | 20 - | @ | | @ | - | @ | - @ | - | @ | - @ | | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 20 - | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| MO0001171 | | - | @ | - | @ | 0.4 | K | - | @ | - | @ | - | @ | - | @ | 7 @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 988 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 104000 @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 988 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 298000 @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 988 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | 58000 @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 2354 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 8538 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |
| | 8538 | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | <u> </u> | @ | - 1 | @ | - | @ | - @ | - | @ | - @ | - | @ | - | @ | - |

| Table B1. Database | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-------|---|-------|---|-------|---|-------|---|-------|----|-------|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|
| Station | 39750 | | 39755 | | 39758 | | 39760 | | 39782 | | 39783 | 39785 | | 80154 | | 80155 | | 81284 | | 82612 | | 81611 | | 81757 | | 77825 | |
| 8798 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 0.001 | U | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2752 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | 0.2 | |
| 8730 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | 0.001 | Ū | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 8730 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | Ū | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2356 @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2356 @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | | @ | | @ | _ | @ | _ | @ | _ | @ | _ | @ | _ | @ |
| 2356 @ | - | @ | - | @ | - | @ | _ | @ | _ | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | - | @ | - | @ |
| 2356 @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - @ | | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | | @ | | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | _ | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | _ | @ | _ | @ | - | @ | _ | @ | - | @ |
| 2469 @ | - | @ | - | @ | _ | @ | - | @ | _ | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | _ | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | - | @ | _ | @ |
| 2469 @ | - | @ | - | @ | - | @ | _ | @ | - | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | _ | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | _ | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | - | @ | | @ | | @ | _ | @ | - | @ | - | @ | - | @ | _ | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | 1 | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | + | @ | - | @ | _ | @ | - | @ | | @ | - @ | - | @ | | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 2469 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 210066 @ | +- | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 210066 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | _ | | | | _ | | _ | | _ | | | | | | - | _ | | _ | - | _ | | | - | | | |
| 210066 @ 210066 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 210066 @ 210066 @ | | @ | | @ | | @ | | @ | - | @ | 9 | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ |
| | + | - | - | @ | - | _ | - | _ | | +- | | - | | | | | - | | | | _ | | | | @ | - | |
| 210066 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 210066 @ | - | @ | - | @ | - | @ | - | @ | | @ | - @ | - | @ | | @ | | @ | - | @ | | @ | - | @ | | @ | - | @ |
| 210067 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | | - | @ | - | @ | - | _ | - | | - | @ | - | @ |
| 210067 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| 210068 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | • | @ |
| 210068 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | • | @ | - | @ | - | @ | - | @ |
| 477504 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477505 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477505 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477505 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| 477505 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |

| | Station | 39750 | 39755 | | 39758 | 39760 | - (| 39782 | | 39783 | 39 | 9785 | | 80154 | 80155 | 5 | 81284 | | 82612 | 2 | 81611 | | 81757 | | 77825 | |
|-----------|------------------------------|---------------------|-------|----------|------------|-------|---------------|-------|---|-------|-----|------|---|------------|----------|----|-------|---|-------|----|-------|---|-------|---|-------|----------|
| | 477505 @ | - @ | - | @ | - @ | - (0 | @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477505 @ | | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477505 @ | | - | @ | - @ | | _ | | @ | - @ | | | @ | - @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477505 @ | | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477505 @ | | - | @ | - @ | | <u>.</u> | | @ | - @ | | | @ | - @ | - | @ | _ | @ | _ | @ | - | @ | _ | @ | _ | @ |
| | 477505 @ | | - | @ | - @ | | <u>@</u> | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | | - | @ | - @ | | <u>@</u> | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | | - | @ | - @ | | œ @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | | - | @ | - @ | | <u>u</u> @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | | | | | œ @ | | _ | | | | | _ | | @ | | @ | | _ | | @ | | @ | | @ |
| | | | - | @ | - @ | | | | @ | | | - | @ | | - | | - | | - | @ | - | | - | | - | |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477506 @ | - @ | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477507 @ | - @ | - | @ | - @ | | @ | - (| @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 477507 @ | - @ | - | @ | - @ | - (| @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 7024070 @ | - @ | - | @ | - @ | - (| @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 7024070 @ | - @ | - | @ | - @ | - (| @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 7024070 @ | - @ | - | @ | - @ | - (| @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7024070 | | | | | | + | | 1 | | + | | | | 1 | + | | H | | + | | H | | | | |
| | 7024070 | | | | | | + | | 1 | | + | | | | 1 | + | | H | | + | | H | | | | |
| | 7024070 | | | \vdash | | | - | | - | | + | | | | | 1 | | | | 1- | | | | | | |
| | 7024070 | | | | | | - | | | | + | | | | | 1 | | | | 1- | | | | | | <u> </u> |
| | 7024070 | | | | | | - | | | | + | | | | | 1 | | | | 1- | | | | | | <u> </u> |
| @ - @ - @ | 7024070 - @7024070 @ | | | | | | + | | - | | + | | | | | +- | | H | | + | | H | | | | |
| @ - @ - @ | - @7024070 @ - @7024070 @ | | | | | | + | | - | | + | | | | | +- | | H | | + | | H | | | | |
| @ - @ - @ | - @7024070 @ 0 | 0 - 0 | - | @ | - @ | - (0 | @ | - (| @ | - @ |) . | _ | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| <u> </u> | 7024070 @ 0 | | - | @ | - @ | | œ @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 7024070 @ 0 5600 @ 0 | | | | | | | | | | | | | | | | | | - | | | | - | _ | - | @ |
| | 5602 @ 0 | | - | @ | - @ - @ | | @ @ | | @ | - @ | | | @ | - @ - @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ |
| | | | | | | | | | _ | | | | | | | | | | | | - | | | @ | - | _ |
| | 360019089484301 @ @ | | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 360019089484301 @ @ | | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 360032089553201 @ | 1 K | - | @ | - @ | | @ | | @ | - @ | | | @ | - @ | - | @ | - | @ | | K | 0.5 | | 0.5 | | 0.01 | |
| | 360320089522001 @ | | - | @ | - @ | | @ | | @ | - @ | | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 360526089440601 K | 1 K | - | @ | - @ | - (| @ | - (| @ | - @ |) . | - | @ | - @ | - | @ | - | @ | 5 | K | 0.5 | K | 0.5 | K | 0.01 | K |

| Station | 39750 | 1 | 39755 | | 39758 | | 39760 | | 39782 | | 39783 | 39785 | | 80154 | | 80155 | | 81284 | | 82612 | | 81611 | | 81757 | 77825 | П |
|-------------------|----------------|---|-------|-----|-------|---|-------|----------|-------|---|-------|-------|---|-------|----------|-------|---|-------|----------|-------|---|-------|----------|-------|-------|----------|
| 360949089435001 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 360949089435001 @ | <u> </u> | @ | _ | @ | | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | | @ | _ | @ | - @ | _ | @ |
| 360949089435001 @ | 1 | @ | - | @ | | @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 361030089425001 @ | - | @ | - | @ | | @ | - | @ | | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| | | _ | - | | | _ | - | @ | - | _ | | - | | | | - | | - | | | @ | - | _ | _ | | @ |
| 361030089425001 @ | - | @ | - | @ | - | @ | - | _ | - | @ | • | - | @ | - | @ | - | @ | - | @ | - | _ | - | @ | • | - | |
| 361130089394001 @ | 1 | @ | | @ | | @ | | @ | - | @ | - @ | | @ | | @ | | @ | | @ | - | @ | | @ | • | - | @ |
| 361140089392903 @ | - | @ | - | @ | - | @ | - | @ | | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361140089393001 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361140089393101 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361242089390401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | • | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361415089450201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361418089444501 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361425089450701 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361455089443301 K | 1 | K | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 5 | K | 0.5 | K | 0.5 K | 0.01 | K |
| 361455089443301 K | 1 | K | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 5 | K | 0.5 | K | 0.5 K | 0.01 | K |
| 361455089443301 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 361920089432801 K | 1 | K | | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 5 | K | 0.5 | K | 0.5 K | 0.01 | K |
| 361937089343201 @ | - | @ | | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362100089422001 @ | - | @ | | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362252089420201 K | 1 | K | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | 5 | K | 0.5 | K | 0.5 K | 0.01 | K |
| 362338089364401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362341089365701 @ | - | @ | - | @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362355089364801 @ | - | @ | - | @ | | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362356089364001 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362406089365401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362408089364301 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362419089365201 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362440089334801 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362527089421101 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362527089421101 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362527089421101 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362528089414301 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362528089414301 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362530089414001 @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362640089295301 @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ |
| 362718089361101 K | 1 | K | - | @ | _ | @ | - | @ | _ | @ | - @ | - | @ | - | @ | - | @ | - | @ | 5 | K | 0.5 | _ | 0.5 K | 0.01 | K |
| 362955089293301 @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | _ | @ | _ | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ |
| 363039089240901 @ | - | @ | _ | @ | | @ | _ | @ | - | @ | - @ | _ | @ | _ | @ | - | @ | - | @ | | @ | _ | @ | - @ | - | @ |
| 363107089363401 @ | - | @ | - | @ | | @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | _ | @ |
| 363107089363401 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ |
| 363107089363401 @ | 1 - | @ | _ | @ | - | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 000101000000-01 | 1 - | 9 | | (%) | _ | w | - | ~ | - | w | . @ | - | ۳ | - | S | 1 - 1 | ۳ | - | S | - | w | _ | w | w. | 1 - | S |

| Station | 39750 |) | 39755 | | 39758 | | 39760 | | 39782 | | 39783 | 39785 | | 80154 | | 80155 | | 81284 | | 82612 | | 81611 | | 81757 | 7782 | 5 |
|--|----------------|-----|-------|----------|-------|----|-------|---|-------|---|------------|-------|---|-------|-----------------------------|-------|----------------------|-------|--------------------------|-------|----|-------|----------|------------|------|---|
| 363107089363401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363107089363401 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | - | @ | | @ | _ | @ | - @ | | @ |
| 363107089363401 @ | 1 | @ | _ | @ | - | @ | - | @ | | @ | - @ | _ | @ | | @ | - | @ | - | @ | | @ | - | @ | - @ | | @ |
| 363107089363401 @ | - | @ | - | @ | - | @ | - | @ | | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| | - | @ | - | | - | @ | - | @ | - | @ | | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363107089363401 @ | - | | - | @ | - | _ | - | @ | - | @ | • | - | _ | | @ | - | @ | - | @ | - | @ | - | @ | | | @ |
| 363107089363401 @ 363107089363401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ - @ | | @ |
| | | @ | | _ | | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363107089363401 @ 363126089291501 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 363130089370001 @ | + | @ | - | @ | - | @ | - | @ | | @ | - @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363157089291701 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | | @ | _ | @ | _ | @ | - | @ | _ | @ | - @ | | @ |
| 363200089350001 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | | @ | _ | @ | | @ | | @ | _ | @ | - @ | _ | @ |
| 363219089310701 @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - | @ | | @ | - | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ |
| 363447089173401 @ | | @ | _ | @ | - | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363500089320001 @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 363517089124501 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | | @ | - | @ | _ | @ | - | @ | _ | @ | - @ | _ | @ |
| 363523089361001 @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | _ | @ | | @ | - | @ | | @ | - | @ | _ | @ | - @ | | @ |
| 363523089361001 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | - | @ | | @ | _ | @ | - @ | | @ |
| 363659089142801 @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | - | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | - @ | | @ |
| 363827089172701 @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | _ | @ | | @ | _ | @ | - | @ | | @ | _ | @ | - @ | _ | @ |
| 363827089172701 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | | @ | _ | @ | - @ | | @ |
| 363827089172701 @ | - | @ | _ | @ | _ | @ | _ | @ | _ | @ | - @ | _ | @ | _ | @ | - | @ | _ | @ | _ | @ | _ | @ | - @ | | @ |
| 363830089173501 @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | | @ | - | @ | - | @ | | @ | _ | @ | - @ | _ | @ |
| 363840089170001 @ | <u> </u> | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | | @ | _ | @ | - @ | | @ |
| 364055089103201 K | <u> </u> | l K | _ | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | | @ | - | @ | | @ | - 5 | K | 0.5 | _ | 0.5 K | 0.0 | |
| 364222089243401 @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | - | @ | _ | @ | - | @ | _ | @ | - | @ | - 0.0 | @ | - @ | | @ |
| 364224089273301 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | - | @ | _ | @ | - | @ | _ | @ | - @ | | @ |
| 364240089313201 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | | @ | _ | @ | - | @ | - | @ | _ | @ | - @ | | @ |
| 364247089273401 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - @ | | @ |
| 364331089123701 K | | l K | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | - | @ | _ | @ | _ | @ | | K | 0.5 | ~ | 0.5 K | 0.0 | _ |
| 364424089151701 @ | _ | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | _ | @ | - | @ | - | @ | | @ | - 0.5 | @ | - @ | _ | @ |
| 364453089282401 K | - - | I K | _ | @ | _ | @ | - | @ | | @ | - @ | _ | @ | - | @ | - | @ | - | @ | - 5 | K | 0.5 | | 0.5 K | 0.0 | |
| 364453089282401 K | | l K | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ | _ | @ | | K | 0.5 | | 0.5 K | 0.0 | |
| 364453089282401 @ | - | @ | _ | @ | - | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - 3 | @ | - 0.3 | @ | - @ | | @ |
| W47371 @ | - | @ | _ | @ | - | @ | _ | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | _ | @ |
| W47371 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | _ | @ | _ | @ | _ | @ | _ | @ | - | @ | _ | @ | - @ | _ | @ |
| W47371 @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | - | @ | _ | @ | - | @ | - | @ | _ | @ | - @ | | @ |
| W47372 @ | - | @ | _ | @ | _ | @ | _ | @ | | @ | - @ | - | @ | - | @ | _ | @ | _ | @ | - | @ | _ | @ | - @ | _ | @ |
| W47373 @ | | @ | _ | @ | - | @ | - | @ | | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| W47373 @ | - | @ | _ | @ | - | @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 2363 @ | - | @ | _ | @ | _ | @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | _ | @ | - | @ | - | @ | - @ | _ | @ |
| 2363 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 2363 @ | - | @ | - | @ | _ | @ | - | @ | | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | _ | @ | - @ | | @ |
| 2363 @ | | @ | - | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 5601 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 989 @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 989 @ | - | @ | _ | @ | _ | @ | _ | @ | - | @ | - @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - @ | _ | @ |
| 989 @ | - | @ | _ | @ | - | @ | - | @ | | @ | - @ | - | @ | _ | @ | - | @ | - | @ | - | @ | - | @ | - @ | | @ |
| 303 W | 1 ~ | ¥ | 1 - | <u> </u> | _ | w. | - | ₩ | - | ¥ | 9) | | w | - | $\underline{\underline{w}}$ | - 1 | $\underline{\omega}$ | - | $\underline{\mathbb{S}}$ | - | w. | _ | <u>w</u> | - (4 | | w |

| | | | S | tation |) | | 39750 | | 39755 | | 39758 | | 39760 | | 39782 | 3 | 9783 | | 39785 | | 80154 | | 80155 | | 81284 | | 82612 | | 81611 | | 81757 | 7 | 77825 | 5 |
|-----|---|---|----------|--------|---|----------|-------|---|-------|---|-------|---|-------|---|------------|---|------|--------|-------|---|-------|----------|-------|---|-------|----------|-------|---|-------|----------|--|----------|--|----|
| | | | | | | 989 @ | | @ | - | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 989 @ | - | @ | - | @ | - | @ | - | @ | - @ | | - (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 989 @ | | @ | - | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 990 @ | | @ | - | @ | - | @ | - | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 990 @ | - | @ | - | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 990 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 990 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 990 @ | - | @ | - | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2353 @ | - | @ | - | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 2353 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2353 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2353 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2353 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | _ | @ | - | @ | | @ | _ | @ | - | @ | - | @ |
| | | | | | | 2353 @ | - | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | H | | | 2357 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | - | | | 2357 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | - | | | 2358 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | - | | | 2358 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | H | | | 2359 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2359 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | - | | | 2359 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2360 @ | | | | @ | - | | | _ | | | | | | @ | | @ | | @ | | @ | | | - | @ | - | @ | - | @ |
| | | | - | | | | | @ | | @ | - | @ | | @ | - @ - @ | | | @ @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | - | | | 2360 @ | | | | _ | | | | _ | | _ | | | | | | | | | | | | | | _ | | | | @ |
| | | | - | | | 2361 @ | - | @ | - | @ | - | @ | - | @ | - @ | | - (| @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | w |
| | | | - | | | 2361 | | | | | | | | | | | | | | | | | | | | | | | | | | + | | |
| | | | - | | | 2361 | | | | | | | | | | + | | | | | | | | | | | | | | | | + | ⊢— | |
| | | | - | | | 2365 | | | | | | | | _ | | | | | | | | | | | | | | | | | | + | - | - |
| | | | _ | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | | \perp | ├ | |
| | | | - | | | 2365 | | | | | | | | | | + | | | | | | | | | | | | | | | | + | ⊢— | |
| | | | _ | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | | \perp | ├ | |
| | | | _ | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | | \perp | ├ | |
| | | | | | | 2365 | | | | | | | | | | 1 | | | | | | | | | | | | | | | | \perp | | _ |
| | | | - | | | 2365 | | | | 4 | | | | _ | | 1 | | | | | | \vdash | | | | <u> </u> | | | | <u> </u> | | + | — | _ |
| | | | | | | 2365 | | | | _ | | | | _ | | - | | | | | | | | | | | | | | | | + | | - |
| | | | | | | 2365 | | | | _ | | | | _ | | - | | | | | | | | | | | | | | | | + | | - |
| | | | _ | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | | \perp | ├ | |
| | | | | | | 2365 | | | | _ | | | | | | | | | | | | ш | | | | | | | | | | \sqcup | <u> </u> | 1_ |
| | | | <u> </u> | | | 2365 | | | | _ | | | | _ | | - | | | | | | | | | | | | | | | | + | | - |
| | | | | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | <u></u> | | <u> </u> | |
| | | | | | | 2365 | | | | | | | | | | | | | | | | | | | | | | | | | <u></u> | | <u> </u> | |
| | _ | | L | | | 2468 | | | | | | | | | | | | | | | | | | | | | | | | | <u> </u> | \perp | <u> </u> | |
| @ - | @ | - | @ | - | @ | 2468 @ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| @ - | @ | - | @ | - | @ | 2468 @ | | | | | | | | | | | | | | | | | | | | | | | | | <u> </u> | | | |
| @ - | @ | - | @ | - | @ | 2468 @ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| @ - | @ | - | @ | - | @ | 2468 @ @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2468 @ | | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | | | | | | 2468 @ | - | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | | | | | | 2468 @ | - | @ | | @ | - | @ | | @ | - @ | | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |

| Station | | 39 | 9750 | | 39755 | | 39758 | | 39760 | | 39782 | | 39783 | 3 | 39785 | | 80154 | | 80155 | | 81284 | | 82612 | | 81611 | | 81757 | \neg | 77825 | |
|-----------|--------|----------|------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|---|-------|-----|-------|---|-------|---|-------|---|-------|-----|-------|--------|-------|---|
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2468 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | (6) | - | @ | - | @ | - | @ | - | (6) | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | , | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - 1 | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| MO0001171 | @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 988 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 988 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 988 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2354 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2354 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2354 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 2354 @ | | - | @ | 1 | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | | @ | - | @ | 1 | @ | - | @ | | @ | - | @ |
| | 2354 @ | <u> </u> | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | 2354 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ |
| | 8538 @ | | - | @ | | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ | - | @ | | @ | - | @ | - | @ | - | @ |
| | 8538 @ | | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | - | @ | | @ | - | @ |

| Table B2 | . Summary statistics for STORET retri | eval data. | | | | | | |
|----------|---------------------------------------|------------|--------|---------|---------|---------|---------|---------|
| PARAM | MEDIUM | NUMBER | MEAN | STANDEV | MAXIMUM | MINIMUM | BEGDATE | ENDDATE |
| 10 | WATER TEMP CENT | 141 | 16.84 | 9.5 | 37 | 2.6 | 560329 | 930305 |
| 59 | FLOW RATE INST-GPM | 4 | 33.3 | 7.86 | 43 | 25.2 | 760915 | 790821 |
| | REDOX ORP MV | 43 | 485.5 | 117.6 | 678 | 232 | 921216 | 930204 |
| 94 | CNDUCTVY FIELD MICROMHO | 43 | 432.3 | 174.1 | 924 | 4 | 921216 | 930204 |
| 95 | CNDUCTVY AT 25C MICROMHO | 84 | 1022 | 1245 | 6700 | 17 | 560329 | 900605 |
| 300 | DO MG/L | 53 | | 3.73 | 13.5 | 0.2 | 690723 | 930204 |
| 301 | DO SATUR PERCENT | 11 | 79 | 14.3 | | 51 | 690723 | 700710 |
| | BOD 5 DAY MG/L | 50 | | 1290 | | 0 | 690724 | 830601 |
| 400 | PH SU | 140 | 7.5 | 0.86 | 11.9 | 3.3 | 510514 | 930305 |
| 410 | T ALK CACO3 MG/L | 42 | 173.3 | 96.2 | | 59 | | 840802 |
| 500 | RESIDUE TOTAL MG/L | 10 | 451.4 | 177.1 | 740 | 218 | 690724 | 700625 |
| 530 | RESIDUE TOT NFLT MG/L | 74 | 6810 | 45998 | 381302 | 1 | 690724 | 830601 |
| 605 | ORG N N MG/L | 25 | 164.2 | 785.4 | 3931 | 0.06 | 830601 | 930204 |
| | NH3+NH4- N DISS MG/L | 9 | | 0.159 | | 0.01 | 690724 | 700625 |
| 610 | NH3+NH4- N TOTAL MG/L | 52 | 14.35 | 63.29 | | 0.01 | 700416 | 930204 |
| 618 | NO3-N DISS MG/L | 17 | 0.144 | | 0.68 | 0 | | 710910 |
| | NO3-N TOTAL MG/L | 9 | | 7.252 | 22 | 0.05 | 860617 | 860618 |
| | TOT KJEL N MG/L | 20 | 2.48 | 2.576 | | 0.2 | 741022 | 760917 |
| | NO2&NO3 N-TOTAL MG/L | 41 | | 1094.1 | 5896.4 | 0.01 | 760914 | 930204 |
| 665 | PHOS-TOT MG/L P | 57 | 30.785 | 193.3 | | 0.02 | 690724 | 930204 |
| | T ORG C C MG/L | 28 | | 8560 | | 0.4 | | 930204 |
| | D ORG C C MG/L | 10 | | 0.44338 | | 3.5 | | 930204 |
| | T. INORG C MG/L | 16 | 68.9 | 45.8 | | 25 | | 930204 |
| | IRON FE,TOT UG/L | 99 | 6666.7 | 32097 | 298000 | 0 | | 930304 |
| | IRON FE,DISS UG/L | 7 | 441.7 | 349.9 | 990 | 48 | | 840802 |
| | MALATHN WHL SMPL UG/L | 4 | | 0 | | 0.05 | | 860618 |
| 39570 | DIAZINON WHL SMPL UG/L | 11 | 0.05 | 0 | 0.05 | 0.05 | 860617 | 860618 |
| 39600 | MPARATHN WHL SMPL UG/L | 11 | 0.05 | 0 | 0.05 | 0.05 | 860617 | 860618 |
| | ATRAZINE WHL SMPL UG/L | 11 | 0.5 | 0 | 0.5 | 0.5 | | 860618 |
| | 2,4-D WHL SMPL UG/L | 11 | 0.01 | 0 | 0.01 | 0.01 | 860617 | 860618 |
| 39740 | 2,4,5-T WHL SMPL UG/L | 11 | 0.011 | 0.003 | 0.02 | 0.01 | 860617 | 860618 |
| 39750 | SEVIN WHL SMPL UG/L | 11 | 1 | 0 | 1 | 1 | 860617 | 860618 |
| 39785 | GBHC-TIS LINDANE WETMG/KG | 12 | | 0 | 0.001 | 0.001 | 860617 | 910909 |
| 81757 | CYANAZIN WHL WAT UG/L | 11 | 0.5 | 0 | 0.5 | 0.5 | 860617 | 860618 |

| Table B3. S | Selected wa | iter quality o | data fr | om USGS | S NAWQA s | studies at Rive | s and More | house, MO. | | | | |
|-------------|-------------|----------------|---------|---------|-----------|-----------------|-------------|-------------|-------------|-------------|----------|-------------|
| | | | | | | | | DISSOLVED | TOTAL | DISSOLVED | TOTAL | DISSOLVE |
| | | | | INST. | SPECIFIC | DISSOLVED | pH, WH, | NITROGEN, | NITROGEN | NITROGEN, | NITROGEN | NITROGEN |
| | | | | DISCH. | CONDUCT | OXYGEN | FIELD | AMMONIA | AMMONIA | NITRITE | NITRITE | AMM + ORG |
| | | | | (cfs) | (uS/cm) | (mg/l) | (standard ι | (mg/l as N) | (mg/l as N) | (mg/l as N) | , | (mg/l as N) |
| Latitude | | Date | Time | 61 | 95 | 300 | 400 | | 610 | 613 | | |
| 365003 | | | 1030 | 155 | 712 | 9 | 7.9 | | -999 | 0.01 | -999 | |
| 365003 | | | 1015 | 156 | 569 | 10.8 | 7.9 | | | 0.01 | -999 | |
| 365003 | | | 815 | 171 | 521 | 5.2 | 8 | | | 0.02 | -999 | |
| 365003 | | 19960404 | 745 | 404 | 428 | 8.2 | 7.9 | | | 0.02 | -999 | |
| 365003 | | 19960409 | 730 | 219 | 522 | 9.6 | 8 | | -999 | 0.01 | -999 | |
| 365003 | 894348 | 19951018 | 1040 | -999 | -999 | -999 | -999 | | -999 | -999 | -999 | |
| 365003 | 894348 | 19951018 | 1450 | -999 | -999 | -999 | -999 | | -999 | -999 | -999 | |
| 365003 | 894348 | 19951018 | 1445 | -999 | -999 | -999 | -999 | | -999 | -999 | -999 | |
| 365003 | | | 1500 | -999 | -999 | -999 | -999 | | -999 | -999 | -999 | |
| 365003 | | | 1000 | 4750 | 99 | 6.2 | 7.1 | 1.9 | -999 | 0.04 | -999 | |
| 365003 | | | 1515 | 2480 | 132 | 7.2 | 7.3 | | -999 | 0.06 | -999 | |
| 365003 | 894348 | 19960521 | 945 | 348 | 575 | 6.8 | 7.7 | 0.02 | -999 | 0.02 | -999 | |
| 365003 | 894348 | 19960605 | 905 | 250 | 558 | 7 | 7.8 | | -999 | 0.02 | -999 | |
| 365003 | 894348 | 19960619 | 1245 | 290 | 459 | 6.1 | 8 | | -999 | 0.02 | -999 | |
| 365003 | | 19960710 | 1315 | 96 | 505 | 8.4 | 8.2 | | -999 | 0.02 | -999 | |
| 365003 | | | 645 | 73 | 585 | 7.1 | 8.2 | 0.07 | -999 | 0.02 | -999 | |
| 365003 | | | 950 | 49 | 592 | 7.8 | 7.9 | | -999 | 0.01 | -999 | |
| 365003 | | | 950 | 43 | 571 | 6.9 | 8.1 | 0.015 | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | 19960904 | 1400 | 42 | 558 | 9.5 | 8.4 | 0.02 | -999 | 0.01 | -999 | |
| 365003 | 894348 | 19960917 | 1420 | 130 | 297 | 7.2 | 7.8 | 0.03 | -999 | 0.01 | -999 | |
| 365003 | 894348 | 19960830 | 800 | -999 | 600 | 6 | 8 | | -999 | -999 | -999 | |
| 365003 | 894348 | 19960830 | 1200 | -999 | 598 | 7.2 | 8.2 | -999 | -999 | -999 | -999 | -999 |
| 365003 | | 19960627 | 930 | -999 | 616 | | 7.9 | | -999 | -999 | -999 | -999 |
| 365003 | | | 1100 | -999 | 545 | | 7.8 | | -999 | -999 | -999 | -999 |
| 365003 | | | 1256 | -999 | 540 | 8.9 | 7.7 | -999 | -999 | -999 | -999 | |
| 365003 | | | 1259 | -999 | 497 | 9.1 | 7.7 | -999 | -999 | -999 | -999 | |
| 365003 | | | 1302 | -999 | 490 | 8.8 | 7.8 | | -999 | -999 | -999 | |
| 365003 | | | 1304 | -999 | 490 | 8.9 | 7.7 | -999 | -999 | -999 | -999 | |
| 365003 | 894348 | 19961002 | 1330 | -999 | 532 | 8.9 | 7.8 | | -999 | -999 | -999 | |
| 365003 | 894348 | 19961002 | 1245 | 96 | 491 | 9.7 | 8.3 | 0.3 | -999 | 0.01 | -999 | 0.2 |

| Table B3. | Selected wa | ater quality | data fro | om USG | S NAWQA s | studies at Rive | s and More | house, MO. | | | | |
|-----------|-------------|--------------|----------|--------|-----------|-----------------|-------------|-------------|-----------------|-------------|-------------|-------------|
| | | | | | | | | DISSOLVED | TOTAL | DISSOLVED | TOTAL | DISSOLVED |
| | | | | INST. | SPECIFIC | DISSOLVED | pH, WH, | NITROGEN, | NITROGEN | NITROGEN, | NITROGEN | NITROGEN, |
| | | | | DISCH. | CONDUCT | OXYGEN | FIELD | AMMONIA | AMMONIA | | | AMM + ORG |
| | | | | (cfs) | (uS/cm) | (mg/l) | (standard u | (mg/l as N) | (mg/l as N) | (mg/l as N) | (mg/l as N) | (mg/l as N) |
| Latitude | Longitude | Date | Time | 61 | 95 | 300 | 400 | 608 | 610 | 613 | 615 | |
| 365003 | 894348 | | 1400 | 71 | 566 | | 8.3 | | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | | | 84 | 568 | | 8 | | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | | 1500 | 154 | 514 | | 7.9 | | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | | 1445 | 440 | 370 | | 7.7 | 0.05 | -999 | 0.01 | -999 | |
| 365003 | 894348 | | | 948 | 218 | 11.8 | 7.4 | | -999 | 0.01 | -999 | |
| 365003 | 894348 | | | 265 | 557 | -999 | 8 | 0.05 | -999 | 0.03 | | |
| 365003 | 894348 | | 1400 | 1030 | 221 | 10.5 | 7.6 | | -999 | 0.01 | -999 | |
| 365003 | 894348 | 19970205 | 1430 | 2210 | 133 | 10.3 | 7.2 | 0.13 | -999 | 0.02 | -999 | |
| 365003 | 894348 | 19970218 | 1500 | 350 | 501 | 10.8 | 8.1 | 0.015 | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | | | 4320 | 94 | 9.4 | 7.1 | 0.07 | -999 | 0.02 | -999 | 0.5 |
| 365003 | 894348 | | | 590 | 396 | | 7.7 | 0.1 | -999 | 0.02 | -999 | |
| 365003 | 894348 | | 1530 | 725 | 353 | 9.9 | 7.8 | 0.11 | -999 | 0.02 | -999 | 0.5 |
| 365003 | 894348 | | 1530 | 388 | 509 | 9.2 | 7.9 | | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | | 1330 | 344 | 493 | 10.1 | 7.9 | 0.02 | -999 | 0.02 | -999 | 0.2 |
| 365003 | 894348 | | 1530 | 3970 | 105 | 7.7 | 7.3 | 0.28 | -999 | 0.04 | -999 | 0.8 |
| 365003 | 894348 | 19970414 | 1410 | 532 | 374 | 9.5 | 7.7 | 0.06 | -999 | 0.02 | -999 | 0.3 |
| 365003 | 894348 | | 830 | 290 | 542 | 8.9 | 7.7 | 0.015 | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | 19970429 | 1015 | 357 | 525 | 8.3 | 8.1 | 0.015 | -999 | 0.011 | -999 | 0.21 |
| 365003 | 894348 | 19970508 | 1105 | 365 | 468 | 8.3 | 7.9 | 0.015 | -999 | 0.043 | -999 | 0.2 |
| 365003 | 894348 | 19970512 | 1515 | 276 | 550 | 9.4 | 8.1 | 0.015 | -999 | 0.01 | -999 | 0.2 |
| 365003 | 894348 | 19970521 | 1400 | 362 | 447 | 9.1 | 8 | 0.015 | -999 | 0.017 | -999 | 0.33 |
| 365003 | 894348 | 19970527 | 1500 | 1330 | 203 | 6.8 | 7 | 0.469 | -999 | 0.101 | -999 | 1.1 |
| 365003 | 894348 | 19970605 | 1315 | 446 | 461 | 7.7 | 7.6 | 0.091 | -999 | 0.097 | -999 | 0.34 |
| 365003 | 894348 | 19970610 | 1310 | 336 | 502 | 8.2 | 7.6 | 0.047 | -999 | 0.036 | -999 | 0.2 |
| 365003 | 894348 | 19970616 | 1315 | 517 | 391 | 7 | 7.3 | 0.071 | -999 | 0.099 | -999 | 0.46 |
| 365003 | 894348 | 19970623 | 1315 | 1430 | 198 | 4.9 | 6.8 | 0.062 | -999 | 0.052 | -999 | 0.53 |
| 365003 | 894348 | 19970630 | | 463 | 361 | 6.8 | 8 | 0.075 | -999 | 0.03 | -999 | 0.36 |
| 365003 | 894348 | 19970710 | 855 | 801 | 260 | 5.7 | 7.7 | 0.035 | -999 | 0.031 | -999 | 0.45 |
| 365003 | 894348 | 19970714 | 1422 | 247 | 445 | 7 | 7.9 | 0.043 | -999 | 0.021 | -999 | |
| 365003 | 894348 | 19970723 | 945 | 186 | 431 | 6.1 | 7.8 | 0.045 | -999 | 0.017 | -999 | 0.24 |

| Table B3. | Selected wa | ter quality o | lata fr | om USG | S NAWQA s | studies at Rive | s and More | house, MO. | | | | |
|-----------|-------------|---------------|---------|--------|-----------|-----------------|------------|--------------|-------------|-----------|-------------|-----------|
| | | | | | | | | DISSOLVED | TOTAL | DISSOLVED | TOTAL | DISSOLVED |
| | | | | INST. | SPECIFIC | DISSOLVED | pH, WH, | NITROGEN, | NITROGEN | NITROGEN, | NITROGEN | NITROGEN, |
| | | | | DISCH. | CONDUCT | OXYGEN | FIELD | | AMMONIA | | NITRITE | AMM + ORG |
| | | | | (cfs) | (uS/cm) | (mg/l) | | .(mg/l as N) | (mg/l as N) | | (mg/l as N) | |
| Latitude | Longitude | | Time | 61 | 95 | | 400 | | 610 | | | |
| 365003 | | 19970730 | 935 | 1590 | 87 | 5.8 | 7.1 | | -999 | 0.018 | | |
| 365003 | | 19970814 | 930 | 98 | 461 | 7.7 | 8.1 | | -999 | 0.012 | | |
| 365003 | | | 1345 | 111 | 488 | | 8.1 | | -999 | | | |
| 365003 | 894348 | | 1310 | 118 | 456 | | 8 | | -999 | 0.014 | | |
| 365003 | 894348 | | 915 | 83 | 550 | | 7.9 | | -999 | 0.01 | | |
| 365003 | 894348 | | 1145 | 105 | 585 | | 7.9 | | -999 | -999 | | |
| 365003 | 894348 | | 1215 | 91 | 564 | | 8.1 | | -999 | 0.01 | -999 | |
| 365003 | 894348 | | | 101 | 564 | | 8.1 | | -999 | 0.027 | -999 | 0.1 |
| 365003 | 894348 | | | 144 | 548 | | 7.6 | | -999 | 0.01 | -999 | |
| 365003 | 894348 | | 1430 | 179 | 555 | | 8.1 | | -999 | 0.01 | | |
| 365003 | 894348 | | 730 | 100 | 577 | 6.8 | 7.8 | | -999 | -999 | | |
| 365003 | 894348 | | 900 | 120 | 580 | 6 | 7.5 | | -999 | -999 | | -999 |
| 360525 | 900447 | 19941004 | 1930 | | | | | -999 | 0.02 | -999 | | -999 |
| 360525 | 900447 | 19941108 | 1300 | | | | | -999 | 0.08 | -999 | | |
| 360525 | 900447 | | 1400 | | | | | -999 | 0.14 | -999 | | -999 |
| 360525 | 900447 | 19950124 | 1250 | | | | | -999 | 0.09 | -999 | | -999 |
| 360525 | 900447 | 19950214 | 930 | | | | | -999 | 0.02 | -999 | | -999 |
| 360525 | 900447 | 19950315 | 630 | | | | | -999 | 0.05 | -999 | | -999 |
| 360525 | 900447 | 19951419 | 800 | | | | | -999 | 0.02 | -999 | | -999 |
| 360525 | 900447 | 19950522 | 1700 | | | | | -999 | 0.08 | -999 | | -999 |
| 360525 | 900447 | 19950620 | 730 | | | | | -999 | 0.01 | -999 | 0.01 | -999 |
| 360525 | 900447 | 19950712 | 1030 | | | | | -999 | 0.06 | | 0.03 | -999 |
| 360525 | 900447 | | 1130 | | | | | -999 | 0.1 | -999 | | -999 |
| 360525 | 900447 | | 1000 | | | | | -999 | 0.05 | -999 | | -999 |
| 360525 | 900447 | | 1500 | | | | | -999 | 0.01 | -999 | | -999 |
| 360525 | | | 1340 | | | | | -999 | 0.1 | -999 | | -999 |
| 360525 | | | | | | | | -999 | -999 | -999 | | -999 |
| 360525 | | | | | | | | -999 | 0.05 | | | -999 |
| 360525 | | | 1610 | | | | | -999 | 0.03 | | | -999 |
| 360525 | 900447 | 19960130 | 1015 | | | | | -999 | 0.24 | -999 | 0.04 | -999 |

| Table B3. S | Selected wa | iter quality o | data fr | om USG | S NAWQA s | studies at Rive | s and More | | | | | |
|-------------|-------------|----------------|---------|--------|-----------|-----------------|-------------|-------------|------|-------------|---------|-------------|
| | | | | | | | | DISSOLVED | | DISSOLVED | | DISSOLVED |
| | | | | INST. | | DISSOLVED | | NITROGEN, | | | | |
| | | | | DISCH. | CONDUCT | OXYGEN | FIELD | AMMONIA | | NITRITE | NITRITE | AMM + ORC |
| | | | | (cfs) | (uS/cm) | (mg/l) | (standard u | (mg/l as N) | | (mg/l as N) | ` ' | (mg/l as N) |
| Latitude | | | Time | 61 | 95 | 300 | 400 | | 610 | | | |
| 360525 | 900447 | 19960213 | 930 | | | | | -999 | 0.04 | | | |
| 360525 | 900447 | | 1445 | | | | | -999 | 0.07 | | | |
| 360525 | 900447 | | 1058 | | | | | -999 | 0.04 | | | |
| 360525 | 900447 | | 1235 | | | | | -999 | 0.17 | | | |
| 360525 | 900447 | | 1105 | | | | | -999 | 0.16 | | | |
| 360525 | 900447 | | 1030 | | | | | -999 | 0.01 | | | |
| 360525 | 900447 | | 1030 | | | | | -999 | 0.03 | | | |
| 360525 | 900447 | | 1100 | | | | | -999 | 0.06 | | | |
| 360525 | 900447 | | 1130 | | | | | -999 | 0.03 | | | |
| 360525 | 900447 | | | | | | | -999 | 0.04 | | | |
| 360525 | 900447 | | 1400 | | | | | -999 | 0.11 | | | |
| 360525 | 900447 | | 1730 | | | | | -999 | 0.13 | | | |
| 360525 | 900447 | | | | | | | -999 | 0.06 | | | |
| 360525 | 900447 | | 1600 | | | | | -999 | 0.08 | | | |
| 360525 | 900447 | | 1315 | | | | | -999 | 0.07 | | | |
| 360525 | 900447 | | 1530 | | | | | -999 | 0.51 | -999 | | |
| 360525 | 900447 | | 1215 | | | | | -999 | 0.19 | | | |
| 360525 | 900447 | | 1530 | | | | | -999 | 0.01 | -999 | | |
| 360525 | 900447 | | 1100 | | | | | -999 | 0.02 | -999 | 0.01 | -999 |
| 360525 | 900447 | 19970904 | 1130 | | | | | -999 | 0.03 | -999 | 0.01 | |
| 360525 | 900447 | | 1430 | | | | | 0.02 | -999 | | -999 | |
| 360525 | 900447 | 19971104 | 1355 | | | | | 0.02 | -999 | 0.03 | -999 | |
| 360525 | 900447 | 19971217 | 1245 | | | | | 0.02 | -999 | 0.01 | -999 | 0.3 |
| 360525 | 900447 | 19980106 | 1030 | | | | | 0.02 | -999 | 0.01 | -999 | |
| 360525 | 900447 | 19980203 | 1345 | | | | | 0.11 | -999 | 0.01 | -999 | 0.3 |
| 360525 | 900447 | 19980303 | 1410 | | | | | 0.07 | -999 | 0.01 | -999 | |
| 360525 | 900447 | | 1145 | | | | | 0.12 | -999 | | | |
| 360525 | 900447 | 19980521 | 1530 | | | | | 0.08 | -999 | | | 0.2 |
| 360525 | 900447 | 19980609 | 1515 | | | | | 0.54 | -999 | 0.17 | -999 | 1 |
| 360525 | 900447 | 19980707 | 1100 | | | | | 0.02 | -999 | | | 0.2 |

| Table B3. | Selected wa | ater quality | data fr | om USG | S NAWQA s | studies at Rive | s and More | house, MO. | | | | |
|-----------|-------------|--------------|---------|--------|-----------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | | | | | | DISSOLVED | TOTAL | DISSOLVED | TOTAL | DISSOLVED |
| | | | | INST. | SPECIFIC | DISSOLVED | pH, WH, | NITROGEN, | NITROGEN | NITROGEN, | NITROGEN | NITROGEN, |
| | | | | DISCH. | CONDUCT | OXYGEN | FIELD | AMMONIA | AMMONIA | NITRITE | NITRITE | AMM + ORG |
| | | | | (cfs) | (uS/cm) | (mg/l) | (standard u | (mg/l as N) |
| Latitude | Longitude | Date | Time | 61 | 95 | 300 | 400 | 608 | 610 | 613 | 615 | 623 |
| 360525 | 900447 | 19980810 | 1415 | | | | | 0.12 | -999 | 0.03 | -999 | 0.7 |
| 360525 | 900447 | 19980909 | 1145 | | | | | 0.05 | -999 | 0.01 | -999 | 0.2 |

| TOTAL | TOTAL | DISSOLVED | | | DISS. | | | | PHOSP | SUSP. | |
|-------------|-------------|-------------|----------|-------------|----------|--------|---------|---------|----------|---------|--------------|
| | | NITROGEN | | DISSOLVED | | CARBON | CARBON | SOLIDS | | RESIDUE | DISS. |
| | | NO2 + NO3 | | PHOSPHOR | | | ORGANIC | @ 180 C | TOTAL | @105 C | IRON |
| (mg/l as N) | (mg/l as N) | (mg/l as N) | (mg/l as | (mg/l as P) | (mg/l as | (mg/l) | (mg/l) | (mg/l) | (mg/l as | | (ug/l as Fe) |
| 625 | 630 | 631 | 665 | 666 | 671 | 681 | 689 | 70300 | 70507 | 530 | 1046 |
| 0.7 | -999 | 0.06 | 0.09 | 0.04 | 0.03 | 2.4 | 0.7 | -999 | -999 | -999 | |
| 0.2 | -999 | 0.12 | 0.05 | 0.03 | 0.02 | 2.4 | 0.6 | -999 | -999 | -999 | |
| 0.4 | -999 | 0.3 | 0.11 | 0.06 | 0.03 | 2.3 | 0.9 | -999 | -999 | -999 | |
| 0.5 | -999 | 0.53 | 0.16 | 0.04 | 0.04 | 3.4 | 1.7 | -999 | -999 | -999 | |
| 0.3 | -999 | 0.2 | 0.1 | 0.03 | 0.03 | 1.7 | 0.6 | -999 | -999 | -999 | 16 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 1.9 | -999 | 1.5 | 0.61 | 0.11 | 0.12 | 11 | 10 | -999 | -999 | -999 | 110 |
| 1.2 | -999 | 2.1 | 0.11 | 0.1 | 0.11 | 8 | 6.5 | -999 | -999 | -999 | 110 |
| 0.4 | -999 | 0.13 | 0.17 | 0.04 | 0.04 | 2.2 | 0.9 | -999 | -999 | -999 | |
| 0.4 | -999 | 0.16 | 0.16 | 0.05 | 0.05 | 2.2 | 0.1 | -999 | -999 | -999 | |
| 0.8 | -999 | 0.37 | 0.22 | 0.05 | 0.05 | 3 | | -999 | -999 | -999 | |
| 0.4 | -999 | 0.4 | 0.11 | 0.04 | 0.06 | 3.4 | 1.1 | -999 | -999 | -999 | |
| 0.5 | -999 | 0.17 | 0.12 | 0.07 | 0.09 | 3.2 | 0.2 | -999 | -999 | -999 | |
| 0.3 | -999 | 0.14 | 0.07 | 0.05 | 0.08 | 2.4 | 0.4 | -999 | -999 | -999 | |
| 0.3 | -999 | 0.08 | 0.12 | 0.07 | 0.07 | 2.1 | 0.5 | -999 | -999 | -999 | |
| 0.2 | -999 | 0.08 | 0.08 | 0.05 | 0.07 | 1.7 | 0.6 | -999 | -999 | -999 | |
| 1.1 | -999 | 0.45 | 0.31 | 0.06 | 0.07 | 5.1 | 2.8 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| 0.2 | -999 | 0.2 | 0.2 | 0.06 | 0.025 | 2.7 | 0.6 | -999 | -999 | -999 | 3 |

| TOTAL | TOTAL | DISSOLVED |) | | DISS. | | | | PHOSP | SUSP. | |
|-------|-------------|-------------|-------|-------------|----------|--------|---------|---------|----------|---------|--------------|
| | | NITROGEN | TOTAL | DISSOLVED | | CARBON | CARBON | SOLIDS | | RESIDUE | DISS. |
| | NO2 + NO2 | | | PHOSPHOR | | | ORGANIC | @ 180 C | | | IRON |
| | (mg/l as N) | (mg/l as N) | | (mg/l as P) | (mg/l as | | (mg/l) | (mg/l) | (mg/l as | | (ug/l as Fe) |
| 625 | 630 | 631 | 665 | 666 | 671 | 681 | 689 | 70300 | 70507 | 530 | 1046 |
| 0.2 | -999 | 0.05 | 0.07 | 0.04 | 0.025 | 2.7 | 0.6 | -999 | -999 | -999 | 5 |
| 0.2 | -999 | 0.05 | 0.05 | 0.04 | 0.025 | 2.7 | 0.6 | -999 | -999 | -999 | |
| 0.3 | -999 | 0.15 | 0.13 | 0.05 | 0.025 | 2.7 | 0.6 | -999 | -999 | -999 | |
| 0.7 | -999 | 0.23 | 0.25 | 0.08 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.9 | -999 | 0.34 | 0.33 | 0.1 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.4 | -999 | 0.16 | 0.09 | 0.02 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.9 | -999 | 0.31 | 0.35 | 0.07 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 1.8 | -999 | 0.55 | 0.47 | 0.11 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.3 | -999 | 0.14 | 0.07 | 0.01 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 1.6 | -999 | 0.22 | 0.47 | 0.08 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.7 | -999 | 0.33 | 0.19 | 0.02 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.8 | -999 | 0.32 | 0.2 | 0.04 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.5 | -999 | 0.21 | 0.12 | 0.04 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.4 | -999 | 0.3 | 0.12 | 0.04 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 1.8 | -999 | 0.73 | 0.64 | 0.16 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.6 | -999 | 0.41 | 0.23 | 0.06 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.24 | -999 | 0.052 | 0.068 | 0.02 | 0.025 | 2.7 | 0.6 | -999 | -999 | | |
| 0.43 | -999 | 0.282 | 0.09 | 0.016 | 0.025 | -999 | 0.6 | -999 | -999 | | |
| 0.49 | -999 | 0.381 | 0.183 | 0.091 | 0.067 | 7.4 | 0.7 | -999 | -999 | | |
| 0.27 | -999 | 0.128 | 0.111 | 0.038 | 0.04 | 2.3 | 0.2 | -999 | -999 | | |
| 0.74 | -999 | 0.28 | 0.228 | 0.037 | 0.036 | 3.4 | 0.5 | -999 | -999 | | |
| 2.5 | -999 | 2.77 | 0.564 | 0.071 | 0.062 | 6.3 | 3.5 | -999 | -999 | | |
| 0.53 | -999 | 1.25 | 0.164 | 0.041 | 0.037 | 3.2 | 0.8 | -999 | -999 | | |
| 0.54 | -999 | 0.516 | 0.149 | 0.018 | 0.03 | 2.8 | 0.5 | -999 | -999 | | |
| 0.95 | -999 | 1.47 | 0.279 | 0.052 | 0.052 | 3.9 | 1.1 | -999 | -999 | | |
| 1.1 | -999 | 0.641 | 0.347 | 0.123 | 0.11 | 7.6 | 1.8 | -999 | -999 | | |
| 1.4 | -999 | 0.472 | 0.416 | 0.053 | 0.051 | 4.3 | 1.5 | -999 | -999 | | |
| 0.94 | -999 | 0.577 | 0.25 | 0.054 | 0.061 | 5.5 | 2.4 | -999 | -999 | | |
| 0.49 | -999 | 0.248 | 0.179 | 0.051 | 0.065 | 4.4 | 1.2 | -999 | -999 | | |
| 0.67 | -999 | 0.211 | 0.172 | 0.053 | 0.074 | 3.7 | 1.1 | -999 | -999 | -999 | 3 |

| TOTAL | TOTAL | DISSOLVED | | | DISS. | | | | PHOSP | SUSP. | |
|-----------|-----------|-------------|--------|-------------|----------|---------|---------|---------|----------|---------|--------------|
| NITROGEN | NITROGEN | NITROGEN | TOTAL | DISSOLVED | PHOSPI | CARBON | CARBON | SOLIDS | ORTHO | RESIDUE | DISS. |
| AMM + OR(| NO2 + NO2 | NO2 + NO3 | PHOSPI | PHOSPHOR | ORTHO | ORGANIC | ORGANIC | @ 180 C | TOTAL | @105 C | IRON |
| | | (mg/l as N) | | (mg/l as P) | (mg/l as | | (mg/l) | (mg/l) | (mg/l as | | (ug/l as Fe) |
| 625 | 630 | 631 | 665 | 666 | 671 | 681 | 689 | 70300 | 70507 | | |
| 0.99 | -999 | 0.388 | 0.176 | 0.027 | 0.024 | 6.8 | 5 | -999 | -999 | -999 | |
| 0.4 | -999 | 0.104 | 0.092 | 0.06 | 0.067 | 2.9 | 1.2 | -999 | -999 | -999 | |
| 0.67 | -999 | 0.098 | 0.232 | 0.09 | 0.089 | 4.3 | 0.8 | -999 | -999 | -999 | |
| 0.32 | -999 | 0.136 | 0.126 | 0.061 | 0.082 | 2.7 | 0.7 | -999 | -999 | -999 | |
| 0.2 | -999 | -999 | 0.098 | 0.047 | 0.056 | 1.8 | 0.3 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| 0.2 | -999 | 0.05 | 0.046 | 0.034 | 0.038 | 1.5 | 0.2 | -999 | -999 | -999 | |
| 0.12 | -999 | 0.077 | 0.038 | 0.025 | 0.029 | 1.6 | 0.2 | -999 | -999 | -999 | |
| 0.16 | -999 | 0.05 | 0.026 | 0.021 | 0.014 | 1.8 | 0.4 | -999 | -999 | -999 | |
| 0.31 | -999 | 0.094 | 0.085 | 0.036 | 0.042 | 3.7 | 0.8 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| 0.29 | 0.02 | -999 | 0.15 | -999 | -999 | | | -999 | 0.1 | -999 | |
| 1.3 | 0.24 | -999 | 0.44 | -999 | -999 | | | -999 | 0.36 | 150 | |
| 1.2 | 0.34 | -999 | 0.44 | -999 | -999 | | | -999 | 0.24 | -999 | |
| 0.71 | 0.25 | -999 | 0.31 | -999 | -999 | | | -999 | 0.23 | 70 | -999 |
| 0.2 | 0.09 | -999 | 0.05 | -999 | -999 | | | -999 | 0.06 | -999 | -999 |
| 0.47 | 0.23 | -999 | 0.2 | -999 | -999 | | | -999 | 0.12 | -999 | -999 |
| 0.37 | 0.05 | -999 | 0.16 | -999 | -999 | | | -999 | 0.1 | -999 | -999 |
| 0.88 | 0.96 | -999 | 0.28 | -999 | -999 | | | -999 | 0.12 | -999 | |
| 0.48 | 0.06 | -999 | 0.23 | -999 | -999 | | | -999 | 0.09 | 64 | |
| 0.83 | 0.36 | -999 | 0.15 | -999 | -999 | | | -999 | 0.15 | -999 | -999 |
| 0.94 | 0.61 | -999 | 0.35 | -999 | -999 | | | -999 | 0.22 | -999 | -999 |
| 0.77 | 0.31 | -999 | 0.16 | -999 | -999 | | | -999 | 0.12 | 56 | -999 |
| 0.38 | 0.02 | -999 | 0.15 | -999 | -999 | | | -999 | 0.12 | -999 | -999 |
| 0.97 | 0.34 | -999 | 0.55 | -999 | -999 | | | -999 | 0.41 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | | | -999 | -999 | -999 | |
| 0.35 | 0.27 | -999 | 0.19 | -999 | -999 | | | 212 | 0.13 | 41 | 43 |
| 0.21 | 0.06 | -999 | 0.06 | -999 | -999 | | | -999 | 0.06 | -999 | -999 |
| 1 | 0.52 | -999 | 0.32 | -999 | -999 | | | 190 | 0.23 | 140 | 26 |

| | | | | | | | | | | | 1 |
|-------------|-------------|-------------|----------|-------------|----------|---------|---------|---------|----------|---------|--------------|
| TOTAL | TOTAL | DISSOLVED | | | DISS. | | | | PHOSP | SUSP. | |
| | | NITROGEN | | DISSOLVED | | CARBON | CARBON | | | RESIDUE | DISS. |
| | | | | PHOSPHOR | ORTHO | ORGANIC | ORGANIC | @ 180 C | TOTAL | @105 C | IRON |
| (mg/l as N) | (mg/l as N) | (mg/l as N) | (mg/l as | (mg/l as P) | (mg/l as | (mg/l) | (mg/l) | (mg/l) | (mg/l as | (mg/l) | (ug/l as Fe) |
| 625 | 630 | 631 | 665 | 666 | 671 | 681 | 689 | 70300 | 70507 | 530 | 1046 |
| 0.28 | 0.12 | -999 | 0.08 | -999 | -999 | | | -999 | 0.07 | -999 | -999 |
| 0.65 | 0.4 | -999 | 0.19 | -999 | -999 | | | -999 | 0.12 | -999 | -999 |
| 0.4 | 0.28 | -999 | 0.1 | -999 | -999 | | | -999 | 0.07 | -999 | -999 |
| 1.1 | 0.99 | -999 | 0.38 | -999 | -999 | | | -999 | 0.18 | -999 | -999 |
| 2.1 | 1.6 | -999 | 0.54 | -999 | -999 | | | 116 | 0.34 | 520 | 20 |
| 0.93 | 0.04 | -999 | 0.24 | -999 | -999 | | | -999 | 0.11 | -999 | -999 |
| 0.54 | 0.02 | -999 | 0.18 | -999 | -999 | | | 214 | 0.18 | 48 | 6 |
| 0.25 | 0.02 | -999 | 0.17 | -999 | -999 | | | -999 | 0.13 | -999 | -999 |
| 0.38 | 0.02 | -999 | 0.13 | -999 | -999 | | | -999 | 0.09 | -999 | -999 |
| 0.78 | 0.29 | -999 | 0.32 | -999 | -999 | | | 144 | 0.26 | 98 | 20 |
| 1.6 | 0.34 | -999 | 0.51 | -999 | -999 | | | -999 | 0.35 | -999 | -999 |
| 1.6 | 0.78 | -999 | 0.48 | -999 | -999 | | | 100 | 0.21 | 250 | 100 |
| 0.38 | 0.21 | -999 | 0.14 | -999 | -999 | | | -999 | 0.09 | -999 | -999 |
| 0.35 | 0.26 | -999 | 0.13 | -999 | -999 | | | -999 | 0.07 | -999 | -999 |
| 0.51 | 0.44 | -999 | 0.18 | -999 | -999 | | | -999 | 0.11 | -999 | -999 |
| 3.4 | 2.4 | -999 | 0.89 | -999 | -999 | | | -999 | 0.33 | -999 | -999 |
| 0.95 | 0.02 | -999 | 0.1 | -999 | -999 | | | 216 | 0.04 | 56 | 9 |
| 0.8 | 0.02 | -999 | 0.2 | -999 | -999 | | | -999 | 0.13 | -999 | -999 |
| 0.54 | 0.02 | -999 | 0.16 | -999 | -999 | | | 202 | 0.11 | 60 | 10 |
| 0.62 | 0.02 | -999 | 0.16 | -999 | -999 | | | -999 | 0.13 | -999 | -999 |
| -999 | -999 | 0.05 | -999 | 0.07 | 0.08 | | | -999 | -999 | -999 | -999 |
| -999 | -999 | 0.08 | -999 | 0.04 | | | | 251 | -999 | 15 | 8 |
| -999 | -999 | 0.09 | -999 | 0.08 | 0.05 | | | -999 | -999 | -999 | |
| -999 | -999 | 0.17 | -999 | 0.07 | 0.08 | | | 201 | -999 | 106 | 46 |
| -999 | -999 | 0.16 | -999 | 0.06 | 0.08 | | | -999 | -999 | -999 | -999 |
| -999 | -999 | 0.49 | -999 | 0.09 | 0.08 | | | -999 | -999 | -999 | -999 |
| -999 | -999 | 0.42 | -999 | 0.12 | 0.1 | | | -999 | -999 | -999 | -999 |
| -999 | -999 | 0.05 | -999 | 0.07 | 0.08 | | | -999 | -999 | -999 | -999 |
| -999 | -999 | 1.9 | -999 | 0.11 | 0.11 | | | 128 | -999 | 102 | 80 |
| -999 | -999 | 0.05 | -999 | 0.1 | 0.1 | | | -999 | -999 | -999 | |

| TOTAL | TOTAL | DISSOLVED |) | | DISS. | | | | PHOSP | SUSP. | |
|-------------|-------------|-------------|----------|-------------|----------|---------|---------|---------|----------|---------|--------------|
| NITROGEN | NITROGEN | NITROGEN | TOTAL | DISSOLVED | PHOSPI | CARBON | CARBON | SOLIDS | ORTHO | RESIDUE | DISS. |
| AMM + ORG | NO2 + NO2 | NO2 + NO3 | PHOSPI | PHOSPHOR | ORTHO | ORGANIC | ORGANIC | @ 180 C | TOTAL | @105 C | IRON |
| (mg/l as N) | (mg/l as N) | (mg/l as N) | (mg/l as | (mg/l as P) | (mg/l as | (mg/l) | (mg/l) | (mg/l) | (mg/l as | (mg/l) | (ug/l as Fe) |
| 625 | 630 | 631 | 665 | 666 | 671 | 681 | 689 | 70300 | 70507 | 530 | 1046 |
| -999 | -999 | 0.28 | -999 | 0.16 | 0.16 | | | 83 | -999 | 50 | 240 |
| -999 | -999 | 0.05 | -999 | 0.15 | 0.13 | | | | | | |

| Table B4 S | Selected ne | sticide data | from USGS | NAWOA s | tudies at Ri | ves and Mo | rehouse, M |
|------------------|-------------|--------------|-------------|---------|------------------|------------|------------|
| Table B4. C | Joioolea pe | Stioide data | 110111 0000 | | DISSOLVE | | |
| | | | | | | | ATRAZINE |
| | | | | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| Latitude | Longitude | Date | Time | #04024 | #04035 | #04037 | #04040 |
| 365003 | 894348 | 19960227 | | .0070< | .0050< | .0180E | .0020< |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0050< |
| 365003 | 894348 | 19960312 | | .0070< | .0050< | .0180E | .0030< |
| 365003 | 894348 | 19960404 | | .0070< | .0030< | .0180E | .0120< |
| 365003 | 894348 | 19960409 | | .0070< | .0050< | .0180E | .0080< |
| 365003 | 894348 | 19951018 | 1040 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19951018 | 1450 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19951018 | 1445 | -999 | | -999 | |
| 365003 | 894348 | 19951018 | 1500 | -999 | -999 | -999 | |
| 365003 | 894348 | 19960507 | | .0070< | .170E | .0140E | .570E |
| 365003 | 894348 | 19960424 | | .0070< | .1702 | .0140E | 0.3 |
| 365003 | 894348 | | | .0070< | .0230< | .0180E | 0.055 |
| 365003 | 894348 | | | .0070< | .0230< | .0180E | 0.055 |
| 365003 | 894348 | 19960619 | | .0070< | .0210< .0270E | .0050E | 0.066 |
| 365003 | 894348 | 19960710 | | .0070< | .0270E | .0050E | 0.26 |
| | | 19960710 | | .0070< | .0040E | .0030E | 0.14 |
| 365003 365003 | 894348 | | | .0070< | | | |
| | 894348 | 19960813 | | .0070< | .0050< | .0180E | 0.009 |
| 365003 | 894348 | 19960820 | | | .0050< | .0180E | 0.0246 |
| 365003 | 894348 | 19960904 | | .0070< | .0050< | .0180E | .0023< |
| 365003 | 894348 | 19960917 | 1420 | | .0050< | .0180E | 0.0379 |
| 365003 | 894348 | 19960830 | 800 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19960830 | 1200 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19960627 | 930 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19951018 | 1100 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19961002 | 1256 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19961002 | 1259 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19961002 | 1302 | -999 | -999 | -999 | -999 |
| 365003 | 894348 | 19961002 | 1304 | -999 | -999 | -999 | |
| 365003 | 894348 | 19961002 | 1330 | -999 | -999 | -999 | |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0022< |
| 365003 | | 19961016 | | .0070< | .0050< | .0180< | .0020< |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0056< |
| 365003 | 894348 | 19961119 | | .0070< | .0050< | .0180E | .0118< |
| 365003 | 894348 | 19961204 | | .0070< | .0050< | .0180E | .0133< |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0177< |
| 365003 | 894348 | 19970114 | | .0070< | .0050< | .0180E | .0018< |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0031< |
| 365003 | 894348 | | | .0070< | .0050< | .0180E | .0128< |
| 365003 | 894348 | 19970218 | | .0070< | .0050< | .0180E | .0016< |
| 365003 | 894348 | 19970304 | | .0070< | .0050< | .0180E | .0136< |
| 365003 | 894348 | 19970313 | | .0070< | .0050< | .0180E | .0039< |
| 365003 | 894348 | 19970317 | | .0070< | .0050< | .0180E | .0043< |
| 365003 | 894348 | 19970324 | | .0070< | .0050< | .0180E | .0028< |
| 365003 | 894348 | | | .0070< | .0036< | .0180E | 0.0059 |
| 365003 | 894348 | | | .0070< | .0335E | .0067E | 0.0632 |
| 365003 | 894348 | | | .0070< | | .0225E | 0.0229 |
| 365003 | 894348 | 19970425 | 830 | .0070< | .0068E | .0055E | 0.0205 |

| DISSOLVE DISSOLVE DISSOLVE DISTITYL | Table B4. S | Selected pe | sticide data | from USGS | NAWQA s | tudies at Ri | ves and Mo | rehouse, M |
|--|-------------|-------------|--------------|-----------|---------|--------------|------------|------------|
| Latitude | | | | | | | | |
| Latitude | | | | | | | | |
| Latitude Longitude Date Time #04024 #04035 #04037 #04040 365003 894348 19970429 1015 .0070< .0153< .0180E .0.065 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.632 .0.633 .0.633 .0.63438 19970521 .0.6070< .0.050< .0.0180E .0.027 .0.6303 .0.632 .0.633 .0.634 .0.633 | | | | | | | | |
| 365003 894348 19970429 1015 .0070< | Latitude | Longitude | Date | Time | , , , | , , , | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 894348 19970527 1500 .0070 .0329E .0122E 0.164 365003 894348 19970605 1500 .0070 .0329E .0122E 0.164 365003 894348 19970610 1315 .0070 .0082 .0180E 0.143 365003 894348 19970616 1315 .0070 .0146E .0078E 0.522 365003 894348 19970623 1315 .0070 .0081E .0041E 0.0321 365003 894348 19970710 .855 .0070 .0.061E .0041E 0.0321 365003 894348 19970714 .1422 .0070 .0.0694 .0296E 0.101 365003 894348 19970730 .935 .0070 .0.050E .0056E .0087 365003 894348 19970814 935 .0070 .0050 .0180E .0073 365003 894348 19970918 915 .0070 .0050 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 894348 19970710 855 .0070< 0.0076 .0488E 0.0961 .365003 894348 19970714 .1422 .0070< 0.0694 .0296E 0.101 .365003 894348 19970730 .935 .0070< 0.0050 .0056E .0087< .365003 .894348 19970814 .930 .0070< .0050E .0056E .0087< .365003 .894348 19970814 .930 .0070< .0039E .0066E .0138< .365003 .894348 .9970826 .1310 .0070< .0050C .0180E .0073< .365003 .894348 .9970826 .1310 .0070< .0050C .0180E .0073< .365003 .894348 .9970918 .915 .0070< .0050C .0180E .0073< .365003 .894348 .9971022 .1215 .0070< .0050C .0180E .0015< .365003 .894348 .9971022 .1215 .0070< .0050C .0180E .0015< .365003 .894348 .9971103 .1315 .0070C .0050C .0180E .0010C .365003 .894348 .9971103 .1315 .0070C .0050C .0180E .0010C .365003 .894348 .9971105 .1315 .0070C .0050C .0180E .00110C .365003 .894348 .9980105 .1430 .0070C .0050C .0180E .00110C .365003 .894348 .9980105 .1430 .0070C .0050C .0180E .00116C .365003 .894348 .9980105 .1430 .0070C .0050C .0180E .00116C .365003 .894348 .9980709 .900 .999 . | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 | | | | | | | | |
| 365003 894348 19970826 1310 .0070 .0050 .0180E .0073 365003 894348 19970918 915 .0070 .0050 .0180E .0041 365003 894348 19971022 1215 .0070 .0050 .0180E .0015 365003 894348 19971103 1315 .0070 .0050 .0180E .0010 365003 894348 19971216 1315 .0070 .0050 .0180E .0012 365003 894348 19980105 1430 .0070 .0050 .0180E .0016 365003 894348 19980709 900 .999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| 365003 894348 19970918 915 .0070 .0050 .0180E .0041 365003 894348 19970904 1145 -999 -999 -999 -999 365003 894348 19971022 1215 .0070 .0050 .0180E .0010 365003 894348 19971216 1315 .0070 .0050 .0180E .0012 365003 894348 19980105 1430 .0070 .0050 .0180E .0016 365003 894348 19980903 730 -999 | | | | | | | | |
| 365003 894348 19970904 1145 -999 | | | | | | | | |
| 365003 894348 19971022 1215 .0070 .0050 .0180E .0015 365003 894348 19971103 1315 .0070 .0050 .0180E .0010 365003 894348 19980105 1430 .0070 .0050 .0180E .0012 365003 894348 19980903 730 -999 -999 -999 -999 -999 365003 894348 19980903 730 -999 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| 365003 894348 19971103 1315 .0070 .0050 .0180E .0010 365003 894348 19971216 1315 .0070 .0050 .0180E .0012 365003 894348 19980105 1430 .0070 .0050 .0180E .0016 365003 894348 19980903 730 -999 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| 365003 894348 19971216 1315 .0070 .0050 .0180E .0012 365003 894348 19980105 1430 .0070 .0050 .0180E .0016 365003 894348 19980709 900 -999 -999 -999 -999 365025 900447 19941004 1930 -999 -999 -999 -999 360525 900447 19941108 1300 -999 -999 -999 -999 360525 900447 19941219 1400 -999 -999 -999 -999 360525 900447 19950124 1250 -999 -999 -999 -999 360525 900447 19950214 930 -999 -999 -999 -999 360525 900447 19950315 630 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 | | | | | | | | |
| 365003 894348 19980105 1430 .0070 .0050 .0180E .0016 365003 894348 19980903 730 -999 | | | | | | | | |
| 365003 894348 19980903 730 -999 | | | | | | | | |
| 365003 894348 19980709 900 -999 | | | | | | | | |
| 360525 900447 19941004 1930 -999 | | | | | | | | |
| 360525 900447 19941108 1300 -999 | | | | | | | | |
| 360525 900447 19941219 1400 -999 | | | | | | | | |
| 360525 900447 19950124 1250 -999 | | | | | | | | |
| 360525 900447 19950214 930 -999 | | | | | | | | |
| 360525 900447 19950315 630 -999 -999 -999 -999 360525 900447 19951419 800 -999 -999 -999 -999 360525 900447 19950522 1700 -999 -999 -999 -999 360525 900447 19950620 730 -999 -999 -999 -999 360525 900447 19950712 1030 -999 -999 -999 -999 360525 900447 19950726 1130 -999 -999 -999 -999 360525 900447 19950808 1000 -999 -999 -999 -999 360525 900447 19950808 1500 -999 -999 -999 -999 360525 900447 19950905 1500 -999 -999 -999 -999 360525 900447 19951125 -999 -999 -999 -999 360525 | | | | | | | | |
| 360525 900447 19951419 800 -999 | | | | | | | | |
| 360525 900447 19950522 1700 -999 | | | | | | | | |
| 360525 900447 19950620 730 -999 | | | | | | | | |
| 360525 900447 19950712 1030 -999 -999 -999 -999 360525 900447 19950726 1130 -999 -999 -999 -999 360525 900447 19950808 1000 -999 -999 -999 -999 360525 900447 19950905 1500 -999 -999 -999 -999 360525 900447 19951030 1340 -999 -999 -999 -999 360525 900447 19951125 -999 -999 -999 -999 360525 900447 19951128 1030 <.007 | | | | | | | | |
| 360525 900447 19950726 1130 -999 | | | | | | | | |
| 360525 900447 19950808 1000 -999 | | | | | | | | |
| 360525 900447 19950905 1500 -999 -999 -999 -999 -999 360525 900447 19951030 1340 -999 -999 -999 -999 -999 360525 900447 19951125 -999 -999 -999 -999 -999 360525 900447 19951212 1610 -999 -999 -999 -999 360525 900447 19960130 1015 -999 -999 -999 -999 360525 900447 19960213 930 -999 -999 -999 -999 360525 900447 19960313 1445 <.007 | | | | | | | | |
| 360525 900447 19951030 1340 -999 -999 -999 -999 360525 900447 19951125 -999 -999 -018 E.004 360525 900447 19951128 1030 <.007 | | | | | | | | |
| 360525 900447 19951125 -999 -999 <.018 | | | | | | | | |
| 360525 900447 19951128 1030 <.007 | | | | | | | | |
| 360525 900447 19951212 1610 -999 -999 -999 -999 360525 900447 19960130 1015 -999 -999 -999 -999 360525 900447 19960213 930 -999 -999 -999 -999 360525 900447 19960313 1445 <.007 | | | | 1030 | | | | |
| 360525 900447 19960130 1015 -999 -999 -999 -999 360525 900447 19960213 930 -999 -999 -999 -999 360525 900447 19960313 1445 <.007 | | | | | | | | |
| 360525 900447 19960213 930 -999 -999 -999 -999 360525 900447 19960313 1445 <.007 | | | | | | | | |
| 360525 900447 19960313 1445 <.007 | | | | | | | | |
| 360525 900447 19960409 1058 <.007 <.005 <.018 E.009 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Table B4. S | Selected pe | sticide data | from USGS | NAWQA s | tudies at Ri | ves and Mo | rehouse, M |
|-------------|-------------|--------------|-----------|----------|--------------|------------|------------|
| | · | | | DISSOLVE | DISSOLVE | DISSOLVE | DIETHYL |
| | | | | PROPACH | SIMAZINE | PROMETO | ATRAZINE |
| | | | | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| Latitude | Longitude | Date | Time | #04024 | #04035 | #04037 | #04040 |
| 360525 | 900447 | 19960611 | 1105 | <.007 | 0.021 | E.005 | E.240 |
| 360525 | 900447 | 19960718 | 1030 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19960813 | 1030 | <.007 | <.005 | <.018 | E.012 |
| 360525 | 900447 | 19960910 | 1100 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19961022 | 1130 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19961120 | 1530 | 0.009 | <.005 | <.018 | E.011 |
| 360525 | 900447 | 19961217 | 1400 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19970122 | 1730 | <.007 | -999 | -999 | -999 |
| 360525 | 900447 | 19970219 | 1715 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19970325 | 1600 | <.007 | <.005 | <.018 | <.002 |
| 360525 | 900447 | 19970416 | 1315 | <.007 | 0.014 | E.002 | E.025 |
| 360525 | 900447 | 19970528 | 1530 | <.007 | 0.079 | <.018 | E.316 |
| 360525 | 900447 | 19970611 | 1215 | <.007 | 0.009 | <.018 | E.053 |
| 360525 | 900447 | 19970722 | 1530 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19970806 | 1100 | <.007 | 0.007 | E.007 | E.011 |
| 360525 | 900447 | 19970904 | 1130 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19971021 | 1430 | -999 | -999 | -999 | |
| 360525 | 900447 | 19971104 | 1355 | <.007 | <.005 | <.018 | E.001 |
| 360525 | 900447 | 19971217 | 1245 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19980106 | 1030 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19980203 | 1345 | -999 | -999 | -999 | -999 |
| 360525 | 900447 | 19980303 | 1410 | <.007 | <.005 | <.018 | E.001 |
| 360525 | 900447 | 19980421 | | <.007 | | <.018 | E.168 |
| 360525 | 900447 | 19980521 | | <.007 | <.005 | <.018 | E.031 |
| 360525 | 900447 | 19980609 | | <.007 | 0.032 | <.018 | E.277 |
| 360525 | 900447 | 19980707 | 1100 | | | | |
| 360525 | 900447 | 19980810 | 1415 | <.007 | <.005 | E.007 | E.009 |
| 360525 | 900447 | 19980909 | 1145 | | | | |

| O. | | | | | | | |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| O. DISSOLVE | EII TEDEN | EII TEDEN | EII TEDED | EII TEDEN | EII TEDEN | EII TEDEN | EII TEDEN |
| CYANAZIN | | | | METHIOC/ | | | |
| | (ug/l) |
| , • , | #38442 | #38478 | #38482 | #38501 | #38538 | #38711 | #38746 |
| | .0350< | .0180< | .0500< | .0260< | .0350E | .0100< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0350< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | 0.035 |
| 2.50< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .160< | .0350< | .0180< | .0500< | .0260< | 0.035 | | .0350< |
| .100< | .0350< | .0180< | .0500< | .0260< | | .0800< | .0350< |
| .0210< | .0350< | .0180< | .0500< | .0260< | | .0600< | .0350E |
| .0070< | .0350< | .0180< | .0500< | .0260< | | .120< | .0350< |
| .0202< | .0350< | .0180< | .0500< | .0260< | | .0800< | 0.035 |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0300< | .0350< |
| .370< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | 0.035 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | .0350< | .0180< | .0500< | .0260< | | .0800< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | | .0300< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | | .0500< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0200< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | | .0900< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0040< | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0100< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| .0092< | .0350< | .0180< | .0500< | .0260< | .0350E | .0100< | .0350< |
| .439< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| | .0350< | .0180< | .0500< | .0260< | .0350E | .0100< | .0350< |

| b. | | | | | | | |
|--------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| _ | FILTERED | EII TEDED | EII TEDEN | EII TEDED | EII TEDED | EII TEDED | EII TEDED |
| | DICAMBA | | | | | BENTAZO | |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #04041 | #38442 | #38478 | #38482 | #38501 | #38538 | #38711 | #38746 |
| .197< | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| .170< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0569< | .0350< | .0180< | .0500< | .0260< | | .0900< | .0350< |
| 1.24< | .0350< | .0180< | .0500< | .0260< | .0350E | .0100< | .0350E |
| .0917< | .0350< | .0180< | .0500< | .0260< | | .0700< | 0.035 |
| .151< | .0350< | .0180< | .0500< | .0260< | | .0600< | 0.035 |
| .0746< | .0350< | .0180< | .0500< | .0260< | .0350E | .0300< | .0350< |
| .119< | .0350< | .0180< | .0500< | .0260< | .0350E | 1.31< | 0.035 |
| .112< | .0350< | .0180< | .0500< | .0260< | | .670< | 0.035 |
| .0215< | .0350< | .0180< | .0500< | .0260< | | .610< | .0350< |
| .0242< | .0350< | .0180< | .0500< | .0260< | | .630< | 0.035 |
| .186< | .0350< | .0180< | .0500< | .0260< | | .490< | .0350< |
| .0166< | .0350< | .0180< | .0500< | .0260< | | .280< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | | .320< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | | .490< | 0.035 |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0037< | .0350< | .0180< | .0500< | .0260< | | .140< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | | .0400< | .0350< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350< | .0140< | .0350< |
| .0040< | .0350< | .0180< | .0500< | .0260< | .0350E | .0200< | .0350< |
| .0040< | .0350< | .0180< | .170< | .0260< | .0350< | .0140< | .240< |
| .0040< | .0350< | .0180< | .170< | .0260< | .0350E | .0200< | .240< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.021 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.009 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.72 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| U., Z | 000 | 555 | 000 | 000 | 555 | 555 | 555 |

| O. | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|-----------------|
| DISSOLVE | FILTERED | FILTERED | FILTERED | FILTERED | FILTERED | FILTERED | FILTERED |
| CYANAZIN | DICAMBA | LINURON | MCPA | METHIOC/ | PROPOXU | BENTAZO | 2,4-DB |
| (ug/l) |
| #04041 | | #38478 | #38482 | | #38538 | #38711 | #38746 |
| 0.32 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.202 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.032 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.199 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.208 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.059 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.569 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.162 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.077 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.057 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |

| FILTERED | FILTERED | DISSOLVE | DISSOLVE | DISSOLVE | Wat. | DISSOLVE | DISSOLVE |
|----------|----------|----------|----------|----------|--------|----------|----------|
| FLUOMET | | CHLORPY | | | | | PARATHIC |
| | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| | #38866 | | #39341 | #39381 | #39415 | #39532 | #39542 |
| | .0180< | 0.004 | | .001E | .003< | .005< | .004< |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| | .0180< | 0.004 | | | .160< | .005< | .004< |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| | .0180< | | .004< | .001E | 8.50< | .005< | .004< |
| | .0180< | 0.004 | | .001E | 6.40< | .005< | .004< |
| | .0180< | 0.004 | | | .330< | .005< | .004< |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| .0350< | 0.018 | | .004< | | .730< | .005< | .004< |
| | .0180< | 0.004 | | | .100< | .005< | 0.004 |
| | .0180< | 0.004 | | | .100< | .005< | .004< |
| | .0180< | 0.004 | | | .024< | .005< | .004< |
| | .0180< | 0.004 | | | .299< | .005< | .004< |
| | .0180< | 0.004 | | | .019< | .005< | .004< |
| | .0180< | 0.004 | .004< | 0.001 | | .005< | .004< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | | -999 | |
| -999 | -999 | -999 | -999 | -999 | | -999 | |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| | .0180< | | .004< | .001E | | .005< | .004< |
| | .0180< | 0.004 | | 0.001 | | .005< | .004< |
| | .0180< | 0.004 | | | .039< | .005< | .004< |
| | .0180< | 0.004 | | | .055< | .005< | .004< |
| | .0180< | 0.004 | | | .057< | .005< | .004< |
| | -999999 | 0.004 | | | .016< | .005< | .004< |
| | .0180< | 0.004 | | | .029< | .005< | .004< |
| | .0180< | 0.004 | | | .042< | .005< | .004< |
| | .0180< | 0.004 | | | .011< | .005< | .004< |
| .0350< | .0180< | 0.004 | | | .032< | .005< | .004< |
| .0350< | .0180< | 0.004 | | | .014< | .005< | .004< |
| .0350< | .0180< | 0.004 | | | .017< | .005< | .004E |
| | .0180< | 0.004 | | | .007< | .005< | .004< |
| | .0180< | 0.004 | | | .104< | .005< | .004< |
| .0350< | .0180< | 0.004 | | | 4.09< | .005< | 0.004 |
| | .0180< | 0.004 | | | .623< | .005< | .004E |
| | .0180< | | .004< | | .285< | .005< | .004 |

| FILTERED | FILTERED | DISSOLVE | DISSOLVE | DISSOLVE | Wat. | DISSOLVE | DISSOLVE |
|----------|----------|----------|----------|----------|--------|----------|----------|
| | OXAMYL | CHLORPY | | | | | PARATHIC |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #38811 | #38866 | • | #39341 | #39381 | #39415 | #39532 | #39542 |
| .0350< | .0180< | 0.004 | | | .911< | .005< | .004< |
| .0350< | .0180< | 0.004 | | 0.001 | 4.27< | .005< | .004< |
| .0350< | .0180< | 0.004 | | | 1.08< | .005< | .004< |
| .120< | .0180< | 0.004 | | | 4.52< | .005< | .004< |
| 1.05< | .0180E | 0.0039 | .004< | | 9.38< | .005< | 0.004 |
| .0500< | .0180< | 0.004 | .004< | | 1.39< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .831< | .005< | .004< |
| .0700< | .0180< | 0.004 | .004< | 0.001 | 1.26< | .005< | .004< |
| .160< | .0180< | 0.004 | .004< | 0.001 | 1.11< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .416< | .005< | .004< |
| .100< | .0180< | 0.004 | .004< | 0.001 | .707< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | 0.222 | .016< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .242< | .005< | .004< |
| .0350< | 0.018 | 0.0045 | .004< | 0.001 | .070< | .005< | .004< |
| .0700< | .0180< | 0.004 | .004< | 0.001 | .070< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .066< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .029< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .007< | .005< | .004< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .008< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .007< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .007< | .005< | .004< |
| .0350< | .0180< | 0.004 | .004< | 0.001 | .009< | .005< | .004< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | -999 | <.004 | <.001 | -999 | <.005 | <.004 |

| FII TERED | FII TERED | DISSOLVE | DISSOI VE | DISSOI VE | Wat | DISSOLVE | DISSOLVE |
|-----------|-----------|----------|-----------|-----------|--------|----------|----------|
| FLUOMET | | CHLORPY | | | | | PARATHIC |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| | #38866 | ` ` , | #39341 | #39381 | #39415 | #39532 | #39542 |
| -999 | -999 | -999 | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | 0.005 | -999 | <.005 | <.004 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | 0.178 | <.005 | <.004 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | 0.023 | <.005 | <.004 |
| -999 | -999 | -999 | <.004 | <.001 | 1.68 | <.005 | <.004 |
| -999 | -999 | -999 | <.004 | <.001 | 9.81 | <.005 | <.004 |
| -999 | -999 | -999 | <.004 | <.001 | 0.873 | <.005 | <.004 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | 0.223 | <.005 | <.004 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | <.004 | <.001 | 0.073 | <.005 | <.004 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | | <.004 | <.001 | | <.005 | <.004 |
| -999 | -999 | | <.004 | <.001 | 0.277 | <.005 | <.004 |
| -999 | -999 | -999 | <.004 | <.001 | 5.3 | 0.008 | <.004 |
| -999 | -999 | -999 | -999 | | -999 | | |
| -999 | -999 | -999 | <.004 | <.001 | 0.47 | <.005 | <.004 |
| | | | | | | | |

| DISSOLVE | DISSOLVE | DISSOLVE | DISSOI VE | DISSOI VE | DISSOLVE | FII TERED | FILTERED |
|----------|--------------|--------------|-----------|------------------|----------|--------------|--------------|
| | ATRAZINE | | 2,4,5-T | SILVEX | | | PROPHAM |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #39572 | #39632 | #39732 | #39742 | #39762 | #46342 | #49235 | #49236 |
| 0.002 | | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | .047< | .035< | .0350< | .0210< .0210E | .002< | .0500< | 0.035 |
| 0.002 | .210< | .050< | .0350< | 0.021 | | .0320< | 0.035 |
| 0.002 | .110< | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| | | | -999 | -999 | -999 | -999 | |
| -999 | -999 -999 | -999 -999 | -999 | -999 | -999 | -999 -999 | -999 -999 |
| -999 | | | | | | | |
| -999 | -999 | -999 | -999 | -999 | | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | | -999 | -999 |
| .002E | 20 | .230< | .0350< | | 2.40< | .0500< | 0.035 |
| .002E | 20 | .550< | .0350< | | 3.20< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .069< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .390< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .082< | .0500< | 0.035 |
| 0.018 | 1.4 | .760< | .0350< | | .057< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .022< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .060< | .0500< | 0.035 |
| 0.002 | .183< | .035< | .0350< | | .033< | .0500< | 0.035 |
| 0.002 | .012< | .035< | .0350< | | .006< | .0500< | 0.035 |
| 0.002 | .226< | .035< | .0350< | 0.021 | .017< | .0500< | 0.035 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.002 | .058< | .035< | .0350< | 0.021 | .005< | .0500< | 0.035 |
| 0.002 | .006< | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | .029< | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | .050< | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | .092< | .035< | .0350< | 0.021 | .007< | .0500< | 0.035 |
| 0.002 | .108< | .035< | .0350< | 0.021 | | .0500< | 0.035 |
| 0.002 | 0.032 | -999 | | -999999< | 0.002 | -999 | -999 |
| 0.002 | | .035< | .0350< | | .006< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .009< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210E | .003< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .009< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210E | .003< | .0500< | 0.035 |
| 0.003 | | .035< | .0350< | .0210E | .003< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210E | .002< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .058< | .0500< | 0.035 |
| 0.002 | 18.6 | | .0350< | | 2.54< | .0500< | 0.035 |
| 0.004 | | .110< | .0350< | | .615< | .0500< | 0.035 |
| 0.004 | | .035< | .0350< | | .063< | .0500< | 0.035 |
| 0.002 | 1.11 | .000 | .0000 | 0.021 | .000 | .0000 | 0.033 |

| DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | FII TERED | FILTERED |
|----------|----------|----------|----------|----------|----------|-----------|----------|
| | ATRAZINE | | 2,4,5-T | SILVEX | | | PROPHAM |
| | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| | #39632 | #39732 | #39742 | #39762 | #46342 | #49235 | #49236 |
| 0.002 | 6.5 | .220< | .0350< | | .603< | .0500< | 0.035 |
| 0.002 | | .170< | .0350< | | 1.27< | .0500< | 0.035 |
| 0.002 | | .110< | .0350< | | .277< | .0500< | 0.035 |
| 0.002 | | .590< | .0350< | | 1.65< | .0500< | 0.035 |
| .010E | 22.1 | .240< | .0350< | | 5.46< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .479< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .179< | .0500< | 0.035 |
| 0.002 | | .190< | .0350< | | .256< | .0500< | 0.035 |
| 0.002 | | .280< | .0350< | | .212< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | | .176< | .0500< | 0.035 |
| 0.002 | 2.13 | | .0350< | | .920< | .0500< | 0.035 |
| 0.002 | 0.813 | | .0350< | | .490< | .0500< | 0.035 |
| 0.002 | | .035< | | | | | |
| | | | .0350< | | .043< | .0500< | 0.035 |
| 0.002 | | 5.83< | .0350< | .0210< | .002< | .0500< | 0.035 |
| | | .035< | .0350< | | .009< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210E | .004< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210E | .004< | .0500< | 0.035 |
| | .054< | .035< | .0350< | .0210E | .003< | .0500< | 0.035 |
| -999 | -999 | -999 | -999 | -999 | | -999 | -999 |
| | | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| 0.002 | | .035< | .0350< | .0210< | .002< | .0500< | 0.035 |
| | | .150< | .0350< | .0210< | .002< | .250< | 0.035 |
| | .014< | .150< | .0350< | .0210< | .002< | .250< | 0.035 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | | |
| -999 | -999 | -999 | -999 | | | | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.031 | -999 | -999 | -999 | 0.006 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.083 | -999 | -999 | -999 | <.01 | -999 | -999 |
| <.002 | 0.32 | -999 | -999 | -999 | 0.006 | -999 | -999 |
| <.002 | 9.3 | -999 | -999 | -999 | 0.36 | -999 | -999 |

| DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | DISSOLVE | FILTERED | FILTERED |
|----------|----------|----------|----------|----------|----------|-----------------|-----------------|
| DIAZINON | ATRAZINE | 2,4-D | 2,4,5-T | SILVEX | ALACHLO | TRICLOPY | PROPHAM |
| (ug/l) | (ug/l) |
| #39572 | | #39732 | #39742 | #39762 | #46342 | #49235 | #49236 |
| <.002 | 5.1 | -999 | -999 | -999 | 1.1 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.18 | -999 | -999 | -999 | 0.009 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.1 | -999 | -999 | -999 | 0.026 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.026 | -999 | -999 | -999 | E.002 | -999 | -999 |
| <.002 | 3.78 | -999 | -999 | -999 | 0.201 | -999 | -999 |
| 0.007 | 12 | -999 | -999 | -999 | 2.98 | -999 | -999 |
| <.002 | 1.42 | -999 | -999 | -999 | 0.184 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.137 | -999 | -999 | -999 | 0.022 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.019 | -999 | -999 | -999 | E.004 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.041 | -999 | -999 | -999 | 0.006 | -999 | -999 |
| <.002 | 7.63 | -999 | -999 | -999 | 0.541 | -999 | -999 |
| <.002 | 0.72 | -999 | -999 | -999 | 0.016 | -999 | -999 |
| <.002 | 6.38 | -999 | -999 | -999 | 0.855 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | 0.22 | -999 | -999 | -999 | 0.028 | -999 | -999 |
| | | | | | | | |

| FII TERED | FII TERED | | FII TERED | FII TERED | | |
|-----------|--|---|---|---|--------------------|--------------------|
| | | REN | | | | |
| | | | | | | (ug/l) |
| | | | , , | | , , | #49314 |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | -999 |
| | | | | | | -999 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | 0.021 |
| | | | | | | 0.021 |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| .0350< | | | | | | .0210E |
| -999 | -999 | -999 | -999 | | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 |
| | | | | | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210E |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0350< | .0110< | .0140< | | .0160< | .0160< | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| | | | | | | .0210< |
| .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| | CHLOROT (ug/l) #49306 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0350 < 0 | (ug/l) (ug/l) #49306 #49307 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 0350 .0110 <td>CHLOROT CHLORAMBEN (ug/l) (ug/l) (ug/l) (449306 #49307 #49308 0350< .0110< .0140< -999</td> <td>CHLOROT CHLORAMBEN (ug/l) (ug/l) (ug/l) (ug/l) (449306 #49307 #49308 #49309 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280<</td> <td> CHLOROT CHLORAMBEN</td> <td> CHLOROT CHLORAMBEN</td> | CHLOROT CHLORAMBEN (ug/l) (ug/l) (ug/l) (449306 #49307 #49308 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< 0350< .0110< .0140< -999 | CHLOROT CHLORAMBEN (ug/l) (ug/l) (ug/l) (ug/l) (449306 #49307 #49308 #49309 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< 0350< .0110< .0140< .0280< | CHLOROT CHLORAMBEN | CHLOROT CHLORAMBEN |

| FII TERED | FILTERED | FII TERED | | FII TERED | FII TERED | AL DICARR | ALDICARB |
|------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | CHLOROT | | | | | SULFONE | |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #49305 | #49306 | #49307 | #49308 | #49309 | #49312 | #49313 | #49314 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | 0.014 | | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | 0.021 |
| | | | | | | .0160< | .0210< |
| .0500< -999 | .0350< | .0110< -999 | .0140< | .0280< | .0160< -999 | | -999 |
| .0500< | -999 .0350< | .0110< | -999 | -999 .0280< | | .0160< | |
| | | | .0140< | | .0160< | | .0210< |
| .0500< | .0350< | .0110< | .0140< | .0280< | .0160< | .0160< | .0210< |
| .230< | .480< | .420< | .0140< | .120< | .550< | .100< | .0210< |
| .230< | .480< | .420< | .0140< | .120< | .550< | .100< | .0210< |
| -999 | -999 | -999 | -999 | -999 | -999 | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | -999 | -999 | -999 | | | | -999 |
| -999 | -999 | -999 | -999 | | -999 | | -999 |
| -999 | | -999 | -999 | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | | | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 | -999 -999 | -999 -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 -999 | -999 -999 -999 | -999 -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 |
| -999 -999 -999 -999 | -999 -999 -999 |
| -999 -999 -999 | -999 -999 -999 | -999 -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 |

| EII TEDED | FILTERED | EII TEDED | | EII TEDED | FILTERED | AL DICADE | |
|-----------|----------|-----------|--------|-----------|----------|-----------|--------|
| | | CHLORAM | IDENI | | ALDICARB | | |
| | | | | | | | |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #49305 | #49306 | #49307 | #49308 | #49309 | #49312 | #49313 | #49314 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |
| L | | l . | 1 | l . | | | · |

| FILTERED | CIS-NONA | T-NONACH | OXYCHLO | ALDRIN | CIS-CHLO | T-CHLORI | CHLORON |
|----------|----------|----------|---------|---------|----------|----------|---------|
| ACIFLUOR | | BM < | BM | BM <2MM | | BM < | BM <2M |
| (ug/l) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49315 | #49316 | #49317 | #49318 | #49319 | #49320 | #49321 | #49322 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999999< | 1.00< | 1.00< | 1.00< | 1.00< | 1.00< | 1.00< | 5.00< |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.07 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.04 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.03 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.06 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.08 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.1 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.03 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.05 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| FILTERED | CIS-NONA | T-NONACH | OXYCHLO | ALDRIN | CIS-CHLO | T-CHLORE | CHLORON |
|----------|----------|----------|---------|---------|----------|----------|---------|
| ACIFLUOR | | BM < | BM | BM <2MM | BM | BM < | BM <2M |
| (ug/l) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49315 | #49316 | #49317 | #49318 | #49319 | #49320 | #49321 | #49322 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.05 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.64 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.34 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.46 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.25 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.06 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.12 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.05 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 0.035 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| FILTERED | CIS-NONA | T-NONACH | OXYCHLO | ALDRIN | CIS-CHLO | T-CHLORE | CHLORON |
|----------|----------|----------|---------|---------|----------|----------|---------|
| ACIFLUOR | BM | BM < | BM | BM <2MM | BM | BM < | BM <2M |
| (ug/l) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49315 | #49316 | #49317 | #49318 | #49319 | #49320 | #49321 | #49322 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | ` | | | | |

| DCPA | O,P'-DDD | P,P'-DDD | O,P'-DDE | P,P'-DDE | O,P'-DDT | P,P'-DDT | DIELDRIN |
|---------|----------|----------|----------|----------|----------|----------|----------|
| | BM <2MM | | • | BM <2MM | | , | BM <2MM |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49324 | #49325 | #49326 | #49327 | #49328 | #49329 | #49330 | #49331 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 5.00< | 1.00< | 1.00< | 1.00< | 1.00< | 2.00< | 2.00< | 1.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| DCPA | O,P'-DDD | P P'-DDD | O,P'-DDE | P,P'-DDE | O,P'-DDT | P,P'-DDT | DIELDRIN |
|---------|----------|----------|----------|----------|----------|----------|----------|
| | BM <2MM | , | , | BM <2MM | | | BM <2MM |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49324 | #49325 | #49326 | #49327 | #49328 | #49329 | #49330 | #49331 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| BM <2MM B (ug/kg) (u | BM <2MM ug/kg) | BM <2MM (ug/kg) | O,P'-DDE BM <2MM (ug/kg) | | O,P'-DDT BM <2MM | P,P'-DDT | DIELDRIN |
|----------------------|-------------------|--------------------|--------------------------------|---------|--|----------|----------|
| (ug/kg) (u | ug/kg) 49325 | (ug/kg) | | BM <2MM | DM 20MM | | |
| | 49325 | ` 0 0, | (ua/ka) | | DIVI <ziviivi< td=""><td>BM <2MM</td><td>BM <2MM</td></ziviivi<> | BM <2MM | BM <2MM |
| #49324 #4 | | #49326 | (3,3) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| | -999 | # 100 <u>2</u> 0 | #49327 | #49328 | #49329 | #49330 | #49331 |
| -999 | | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |

| ENDOSUL | ENDRIN | ALPHA-BH | BETA-BHC | HEPTA-CH | HEPTACH | BENZENE | ISODRIN |
|---------|---------|----------|----------|----------|---------|---------|---------|
| BM | BM <2MM | BM <2M | BM <2MM | | EPOXI | HEXACHL | |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49332 | #49335 | #49338 | #49339 | #49341 | #49342 | #49343 | #49344 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 1.00< | 2.00< | 1.00< | 1.00< | 1.00< | 1.00< | 1.00< | 1.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| ENDOSUL | ENDRIN | ALPHA-BH | BETA-BHC | HEPTA-CH | HEPTACH | BENZENE | ISODRIN |
|---------|---------|----------|----------|----------|---------|---------|---------|
| ВМ | BM <2MM | BM <2M | BM <2MM | BM < | EPOXI | HEXACHL | BM <2MM |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49332 | #49335 | #49338 | #49339 | #49341 | #49342 | #49343 | #49344 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| ENDOSUL | ENIDDIN | | BETA-BHC | LIEDTA CL | HEDTACH | DENIZENIE | ICODDIN |
|---------|---------|---------|----------|-----------|---------|-----------|---------|
| | | | | | | | |
| BM | | BM <2M | BM <2MM | | EPOXI | HEXACHL | |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49332 | | #49338 | #49339 | #49341 | #49342 | #49343 | #49344 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 555 | 555 | 333 | 555 | 555 | 333 | 333 | 333 |
| <u></u> | | | | | | | |

| | | | | | | | ALDRIN |
|---------|---------|---------|---------|----------|----------|----------|---------|
| LINDANE | METHOXY | METHOXY | MIREX | CIS-PERM | ETHRIN | TOXAPHE | BIOTA |
| BM <2MM | | O,P | BM <2MM | < | TRANS-PE | | WH |
| | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| ` 0 0, | #49346 | #49347 | #49348 | #49349 | #49350 | #49351 | #49353 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | | -999999< | 5.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | 5.00< | 5.00< | 1.00< | 5.00< | 5.00< | 200 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| | | | | | | | ALDRIN |
|---------|---------|---------|---------|----------|----------|---------|---------|
| LINDANE | METHOXY | METHOXY | MIREX | CIS-PERM | ETHRIN | TOXAPHE | |
| | P,P | O,P | BM <2MM | < | TRANS-PE | | WH |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49345 | | #49347 | #49348 | , , , | #49350 | #49351 | #49353 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| | | | | | | | ALDRIN |
|---------|---------|---------|---------|----------|----------|---------|---------|
| LINDANE | METHOXY | METHOXY | MIREX | CIS-PERM | ETHRIN | TOXAPHE | BIOTA |
| BM <2MM | P,P | O,P | BM <2MM | < | TRANS-PE | BM <2M | WH |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49345 | #49346 | #49347 | #49348 | #49349 | #49350 | #49351 | #49353 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |

| PCB | | | | | | | |
|------|---------|----------|---------|----------|----------|---------|---------|
| | TOXAPHE | NF | OXYCHLO | RDANE | CIS-NONA | MIREX | PPMETHO |
| | WH ORG | PENTCHLO | | TRANS-NO | | WH ORG | W |
| | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| | #49355 | #49356 | #49357 | #49358 | #49359 | #49360 | #49361 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | 200< | 5.00< | 5 | | 5.50< | 5.00< | 5.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| PCB | | | | | | | |
|---------|---------|----------|---------|----------|----------|---------|---------|
| BIOTA | TOXAPHE | NE | OXYCHLO | RDANE | CIS-NONA | MIREX | PPMETHO |
| WH ORG | WH ORG | PENTCHLO | WH | TRANS-NO | WH | WH ORG | W |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| | #49355 | #49356 | #49357 | #49358 | #49359 | #49360 | #49361 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| PCB | | | | | | | |
|---------|---------|----------|---------|----------|----------|---------|----------------|
| BIOTA | TOXAPHE | NE | OXYCHLO | RDANE | CIS-NONA | MIREX | PPMETHO |
| WH ORG | WH ORG | PENTCHLO | WH | TRANS-NO | WH | WH ORG | W |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49354 | #49355 | #49356 | #49357 | #49358 | #49359 | #49360 | #49361 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |

| OPMETHO | LINDANE | DELTA-BH | BETA-BHC | ALPHA-BH | IC | | HEPTACH |
|---------|---------|----------|----------|----------|---------|---------|---------|
| W | WH ORG | WH ORG | WH ORG | WH ORG | | HEPTACH | |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49362 | #49363 | #49364 | #49365 | #49366 | #49367 | #49368 | #49369 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 5.00< | 5.00< | 5.30< | 5.00< | 5.00< | 5.00< | 5.00< | 5.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -555 | -999 | -999 | -999 | -555 | -999 | -999 | -999 |

| OPMETHC | | | | ALPHA-BH | | | HEPTACH |
|---------|---------|---------|---------|----------|---------|---------|---------|
| W | WH ORG | WH ORG | WH ORG | WH ORG | HEXACHL | HEPTACH | WH ORG |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49362 | #49363 | #49364 | #49365 | #49366 | #49367 | #49368 | #49369 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| | Г | Г | | | П | Г | |
|----------|---------|----------|----------|------------|---------|---------|----------|
| ODMETHO | | DELTA DI | DETA DUG | AL DUIA DU | 10 | | LIEDTAGU |
| OPMETHC | | | BETA-BHC | | | | HEPTACH |
| W | WH ORG | WH ORG | WH ORG | | | HEPTACH | |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49362 | #49363 | #49364 | #49365 | #49366 | #49367 | #49368 | #49369 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | 200 |
| <u> </u> | | | | | | | |

| ENDRIN | DIELDRIN | P.P'-DDE | O,P'-DDE | O,P'-DDD | P.P'-DDD | P,P'-DDT | O,P'-DDT |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| WH ORG | | WH ORG | WH ORG | | WH ORG | WH ORG | WH ORG |
| (ug/kg) |
| #49370 | | #49372 | #49373 | | #49375 | #49376 | #49377 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 5 | 25 | 43.0< | 5.00< | 5 | 14.0< | 5.00< | 5.00< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 -999 |
| -999 -999 |
| -999 | -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| ENDRIN | DIELDRIN | P P'-DDF | O,P'-DDE | O,P'-DDD | P,P'-DDD | P,P'-DDT | O,P'-DDT |
|---------|----------|----------|----------|----------|----------|----------|----------|
| WH ORG | | WH ORG | WH ORG | | WH ORG | WH ORG | WH ORG |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49370 | | #49372 | #49373 | #49374 | #49375 | #49376 | #49377 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |

| ENDRIN | DIELDRIN | P.P'-DDE | O,P'-DDE | O,P'-DDD | P,P'-DDD | P,P'-DDT | O,P'-DDT |
|---------|----------|----------|----------|----------|----------|----------|----------|
| WH ORG | WH ORG | WH ORG | WH ORG | WH ORG | WH ORG | WH ORG | WH ORG |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| #49370 | #49371 | #49372 | #49373 | | #49375 | #49376 | #49377 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |

| | | | | | | | FILTERED |
|--------------|--------------|--------------|--------------|--------------|------------------|----------------|----------------|
| DCPA | T-CHLORE | C-CHLORE | DANE | | FII TERED | FILTERED | |
| WH ORG | WH ORG | WH ORG | | METRIBUZ | | | 0.7 |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #49378 | #49379 | #49380 | #49381 | #82630 | #82661 | #82663 | #82664 |
| -999 | -999 | -999 | -999 | | .0060< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0060< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| 5.00< | 5 | 5 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | | 62E | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .190< | .0100< | .0040< | .0020< |
| -999 | | | -999 | | | .0040< | |
| | -999 | -999 | | | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | -999 | | .0020< | | .0020< |
| -999 | -999 | -999 | -999 | | | .0040< | .0020< |
| -999 | -999 | -999 | -999 | | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | -999 | | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 | -999 -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 -999 | -999 | -999 | -999 -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | | |
| -999 | -999 | -999 | | .004< | .0020< | -999 .0040< | -999 .0020< |
| | | | | | | | |
| -999 -999 | -999 | -999 -999 | | .004< | .0020< .0020< | .0040< | .0020< |
| | -999 | -999 | | .004< | | .0040< | .0020< |
| -999 | -999 | | | | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .005< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .010< | .0022< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 -999 | -999 | -999 | | .008< | .0020< | .0040< | .0020< |
| | -999 | -999 | | | .0020< | | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .006< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | | .010< | .0039< | .0040< | .0020< |
| -999 | -999 | -999 | | .004< | .0020< | .0040< | .0020< |
| -999 | -999 | -999 | -999 | .004< | .0020< | .0040< | .0020< |

| DCPA | | | | | | | | FILTERED |
|--|------|----------|----------|-------|-----------|-----------|-----------|----------|
| WH ORG | DCPA | T-CHLORE | C-CHLORE |) ANF | | FII TERED | FII TERED | |
| (ug/kg) (ug/kg) (ug/kg) (ug/kg) (ug/kg) (ug/l) (u | | | | | METRIBLIZ | | | |
| #49378 #49389 -999 -999 -999 .000 .0000 . | | | | | | | | |
| -999 -999 -999 -999 -999 -999 -904 -0020 -999 | | | | | , , , | | | , , |
| -999 -999 -999 -999 -999 -999 -004< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020< .0040< .0020 | | | | | | | | |
| -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .0066 .0040 .0020 -999 -999 -999 -999 .006 .0040 .0020 -999 -999 -999 -999 .0040 .0040 .0020 -999 -999 -999 .999 .0040 .0040 .0020 -999 -999 -999 .999 .0040 .0020 .0020 -999 -999 -999 .999 .0040 .0020 .0020 -999 -999 -999 .999 .0040 .0020 .0020 -999 -999 -999 .999 .0020 .0040 .0020 -999 -999 -999 .999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .099 .099 .099 .999 .999 .999 | | | | | | | | |
| -999 -999 -999 -999 -999 -909 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 -999 .030 .0040 .0020 -999 -999 -999 .036 .0040 .0040 .0020 -999 -999 -999 .999 .094 .0040 .0020 -999 -999 -999 -999 .099 .0088 .0040 .0020 -999 -999 -999 .999 .043 .0088 .0040 .0020 -999 -999 -999 .999 .046 .0082 .0040 .0020 -999 -999 -999 .999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .099 . | | | | | | | | |
| -999 -999 -999 -999 -099 -099 -099 -099 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -090 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 -999 .012 .0040 .0020 -999 -999 -999 .999 .024 .0081 .0040 .0020 -999 -999 -999 .999 .990 .040 .0020 -999 -999 -999 .991 .011 .0315 .0040 .0020 -999 -999 -999 .999 .029 .0020 .0040 .0020 -999 -999 -999 .999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .099 .099 .9 | | | | | | | | |
| -999 -999 -999 .999 .024 .0081 .0040 .0020 -999 -999 -999 .999 .043 .0088 .0040 .0020 -999 -999 -999 .999 .099 .0040 .0020 -999 -999 -999 .099 .0040 .0020 -999 -999 -999 .099 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .999 .999 . | | | | | | | | |
| -999 -999 -999 -999 .043 .0040 .0020 -999 -999 -999 .999 .011 .0315 .0040 .0020 -999 -999 -999 .999 .046 .0082 .0040 .0020 -999 -999 -999 .999 .020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .002 .0020 .0040 .0020 -999 -999 -999 .999 .002 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .099 .099 .999 .999 .999 .999 .999 .999 .999 .999 . | | | | | | | | |
| -999 -999 -999 -999 .046 .0082 .0040 .0020 -999 -999 -999 .999 .029 .0020 .0040 .0020 -999 -999 -999 .999 .099 .090 .0040 .0020 -999 -999 -999 .999 .090 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 . | | | | | | | | |
| -999 -999 -999 .999 .046 .0082 .0040 .0020 -999 -999 -999 .999 .0020 .0040 .0020 -999 -999 -999 .999 .094 .0020 .0040 .0020 -999 -999 -999 .999 .099 .090 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .999 -999 .999 .999 -999 .999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 -999 .000 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .0040 .0020 -999 -999 -999 .999 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 . | | | | | | | | |
| -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .089 .0044 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 -999 .999 .999 -999 -999 -999 .999 .999 .999 .999 -999 -999 -999 .999 .999 .999 .999 -999 -999 -999 .999 .999 .999 .999 -999 -999 -999 .999 .999 .999 .999 .999 -999 | | | | | | | | |
| -999 -999 -999 -999 .004 .0040 .0020 -999 -999 -999 .020 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 | | | | | | | | |
| -999 -999 -999 .020 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .004 .0020 .0040 .0020 -999 -999 -999 .999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .099 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .999 .999 -999 .9 | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .099 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999< | | | | | | | | |
| -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 .099 .004 .0020 .0040 .0020 -999 -999 -999 -999 .099 .099 .0040 .0020 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | |
| -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 .004 .0020 .0040 .0020 -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -9 | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 -999 -999 -999 -999 -999 -99 | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<> | | | | | | | | |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td></td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-999</td></td<> | | | | | | | | -999 |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-999</td></td<> | | | | | | | | -999 |
| -999 -999 <td< td=""><td></td><td></td><td>-999</td><td></td><td></td><td></td><td></td><td>-999</td></td<> | | | -999 | | | | | -999 |
| -999 -999 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-999</td></td<> | | | | | | | | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td></td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td></td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 -999 <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -004 <.002 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -004 -002 -999 -999 -999 -999 -004 -999 -004 <.002 | -999 | -999 | -999 | -999 | <.004 | | <.004 | <.002 |
| -999 -004 <.002 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -004 -999 <.004 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 -999 -999 -999 -999 -999 -999 -999 -999 -004 -999 <.004 | | | | | | | | -999 |
| -999 -999 -999 004 -999 <.004 | | | -999 | -999 | -999 | | | -999 |
| -999 -999 -999 <.004 -999 <.004 <.002 | | | | | | | | |
| | | | | | | | | |
| -999 -999 -999 -999 <.004 -999 <.004 <.002 | -999 | -999 | -999 | | | | | <.002 |

| | | | | | | | FILTERED |
|---------|----------|----------|----------|----------|----------|----------|----------|
| DCPA | T-CHLORE | C-CHLORE | DANE | | FILTERED | FILTERED | PHORATE |
| WH ORG | WH ORG | WH ORG | DIBUTYLP | METRIBUZ | TRIFLURA | ETHALFLU | 0.7 |
| (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #49378 | #49379 | #49380 | #49381 | #82630 | #82661 | #82663 | #82664 |
| -999 | -999 | -999 | -999 | 0.72 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | 0.017 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | 0.005 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | 1.1 | -999 | <.004 | 0.013 |
| -999 | -999 | -999 | -999 | 0.054 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | <.002 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | -999 |
| -999 | -999 | -999 | -999 | 0.034 | -999 | <.004 | -999 |
| -999 | -999 | -999 | -999 | <.004 | -999 | <.004 | -999 |
| -999 | -999 | -999 | -999 | 0.713 | -999 | <.004 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | | -999 |
| -999 | -999 | -999 | -999 | <.01 | -999 | <.004 | -999 |
| | | | | | | | |

| FILTERED | FII TERED | | FII TERED | FILTERED | | FII TERED | FILTERED |
|--------------|--------------|--------------|--------------|----------|--------------|------------------|--------------|
| | LINURON | | EPTC | | | | ETHOPRO |
| 0.7 | | | | | TEBUTHIL | | 0.7 |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #82665 | #82666 | #82667 | #82668 | #82669 | #82670 | #82671 | #82672 |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0280< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | | .0130< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0100< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | 1.40< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0080< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0060< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| | | .0060< | | | | | |
| .0070< | 0.002 | | .0020< | .0040< | .0100< | .0040< | .0030< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 | -999 -999 | -999 -999 | -999 -999 | | -999 -999 | -999 -999 | -999 -999 |
| -999 | -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | | | -999 | |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| | .0020< | | | | | | |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< .0116< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0078< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0078< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0042< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100E | .0034< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0034< | .0030< |
| | | | | | | | |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0175< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0151< | .0030< |
| .0070< | .0020< | .0200< | .0020< | .0040< | | .0053< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0137< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0124< | .0030< |

| FILTERED | FILTERED | | FILTERED | FILTERED | | FILTERED | FILTERED |
|-----------------|---------------|---------------|---------------|---------------------------|-----------------|---------------|----------------|
| TERBACIL | LINURON | METHYL | EPTC | PEBULATE | FILTERED | MOLINATE | ETHOPRO |
| 0.7 | 0.7 | PARATHIC | 0.7 REC | 0.7 | TEBUTHIL | | 0.7 |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #82665 | #82666 | #82667 | #82668 | #82669 | #82670 | #82671 | #82672 |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0105< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0138< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0710< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040E | 0.0096 | 1.84< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040E | 0.0168 | .0352< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .124< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040E | 0.0093 | .513< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040E | 0.0124 | .308< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040E | 0.0157 | .102< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0249< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .171< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0271< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100< | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .739< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .103< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0363< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | | .0156< | .0030< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100E | .0040< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100E | .0034< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | .0100E | .0035< | .0030< |
| .0070< | .0020< | .0060< | .0020< | .0040< | 0.01 | .0041< | .0030< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | <.004 | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | <.004 | <.003 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | <.004 | <.003 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | <.004 | <.003 |
| \. 001 | ∼. 00∠ | ∼. 000 | ∼. 00∠ | ∼. ∪∪ + | √. ∪1 | \. 00+ | \. 000 |

| FILTERED | FILTERED | | FILTERED | FILTERED | | FILTERED | FILTERED |
|-----------------|----------|--------------|----------|----------|-----------------|----------|----------------|
| TERBACIL | LINURON | METHYL | EPTC | PEBULATE | FILTERED | MOLINATE | ETHOPRO |
| 0.7 | 0.7 | PARATHIC | 0.7 REC | 0.7 | TEBUTHIL | 0.7 | 0.7 |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | | (ug/l) | (ug/l) |
| #82665 | #82666 | #82667 | #82668 | #82669 | #82670 | #82671 | #82672 |
| <.007 | <.002 | <.006 | <.002 | | <.01 | 0.53 | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | 0.153 | <.003 |
| -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | 0.007 | <.003 |
| | | | | <.004 | | 0.007 | <.003 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | 1.43 | <.003 |
| <.007 | <.002 | <.006 | <.002 | <.004 | <.01 | 0.603 | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | <.006 | | | | | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | -999 | | | | | |
| -999 | <.002 | <.006 | <.002 | <.004 | <.001 | E.004 | <.003 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | | -999 | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | <.002 | <.006 | <.002 | <.004 | <.001 | <.004 | <.003 |
| -999 | <.002 | <.006 | <.002 | <.004 | 0.015 | E.004 | <.003 |
| -999 | <.002 | <.006 | <.002 | <.004 | <.001 | 0.273 | <.003 |
| | | <.006 | <.002 | <.004 | <.001 | 3.24 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | <.002 | <.006 | <.002 | <.004 | <.001 | 0.196 | <.003 |
| | | | | | | | |

| | | FILTERED | EII TEDED | | EII TEDEN | EII TEDEN | FILTERED |
|-----------|-----------|----------|-----------|------------------|------------------|-----------|----------|
| EII TEDEN | EII TEDEN | | | FILTERED | | | |
| | CARBOFU | | | DISULFOT | | 0.7 | 0.7 |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #82673 | #82674 | | #82676 | #82677 | #82678 | #82679 | #82680 |
| .0020< | | .0130< | | | | | |
| .0020< | .0030< | .0130< | .0030< | .0170< .0170< | .0010< .0010< | .0040< | .0030< |
| | | .0130< | | | | | |
| .0020< | .0030< | | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010E | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | 0.001 | .260E | 0.008 |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | | | -999 | |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | | | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040E | .0206< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040E | .0066< |

| .0020 .0030 .0130 .0030 .0170 .0010 .0030 .999 .9030 .0030 .0030 .0030 .0030 .0030 .0030 .0040 .0030 .0030 .0040 .0030 .0030 .0040 .0030 .0040 .0030 .0040 .0030 .0040 .0030 .0040 .0040 .0030 .0040 .0040 .0030 .0040 .0040 .0030 .0040 | | | EII TEDED | EII TEDED | | EII TEDEN | EII TEDEN | EII TEDEN |
|--|-----------|-----------|-----------|-----------|--------|-----------|-----------|-----------|
| BENFLUR CARBOFU 0.7 0.7 0.1 0.7 0. | EII TEDEN | EII TEDEN | | | | | | |
| (ug/l) (ug/l)< | | | | | | | | |
| #82673 #82674 #82675 #82676 #82677 #82678 #82679 #82680 .0020 .0030 .0130 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0001 .0188 .003 .0020 .0030 .0130 .0030 .0170 .0001 .004 .003 .0020 .0030 .0130 .0030 .0170 .0001 .0182 .003 .0020 .0030 .0130 .0030 .0170 .0001 .0382 .003 .0020 .0030 .0130 .0030 .0170 .0001 .388 .003 .0020E .280 .0130 .0030 .0170 .0010 .0040 .003 .0020 .0037 .0130 .0030 .0170 .0010 .0040 .0030 <td< td=""><td>_ ` • /</td><td></td><td></td><td></td><td></td><td></td><td></td><td>, ,</td></td<> | _ ` • / | | | | | | | , , |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0001 .088 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0046 .0217E .0020 .0030 .0130 .0030 .0170 .0010 .00182 .003 .0020 .0030 .0130 .0030 .0170 .0011 .0182 .003 .0020 .0030 .0130 .0030 .0170 .0011 .661 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .003 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0011 .0188 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0040E .0217E .0020 .0030 .0130 .0030 .0170 .0010 .0040E .0217E .0020 .0030 .0130 .0030 .0170 .0001 .092 .003 .0020 .0030 .0130 .0030 .0170 .001 .992 .003 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 0.001 .018 0.003 .0020 .0030 .0130 .0030 .0170 0.001 2.05 0.003 .0020 .0030 .0130 .0030 .0170 0.001 .0040E .0217E .0020 .0030 .0130 .0030 .0170 0.001 .092 .003 .0020 .0030 .0130 .0030 .0170 0.001 .982 .003 .0020E .280 .0130 .0030 .0170 0.001 .982 .003 .0020E .280 .0130 .0030 .0170 .0010 .0040 .003 .0020E .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0.001 2.05 0.003 .0020 .0030 .0130 .0030 .0170 .0010 .0040E .0217E .0020 .0030 .0130 .0030 .0170 .0.001 .092 .0.03 .0020 .0030 .0130 .0030 .0170 .0.001 .992 .0.03 .0020 .0030 .0130 .0030 .0170 .0.001 .284 .0.03 .0020 .0030 .0130 .0030 .0170 .0.010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040E .0217E .0020 .0030 .0130 .0030 .0170 .0011 .0992 .0030 .0020 .0030 .0130 .0030 .0170 .0001 .0992 .003 .0020 .0030 .0130 .0030 .0170 .0001 .584 .003 .0020E .280 .0130 .0030 .0170 .0010 .0040 .0030 .0020E .0197 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 0.001 .0182 0.003 .0020 .0030 .0130 .0030 .0170 0.001 .092 0.003 .0020 .0030 .0130 .0030 .0170 0.001 .584 0.003 .0020E .280 .0130 .0030 .0170 0.001 .561 0.003 .0020E .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020E .0197 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 0.001 .0992 0.003 .0020 .0030 .0130 .0030 .0170 0.001 .238 0.003 .0020E .280 .0130 .0030 .0170 .0010 .0040 .0030 .0020E .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020E .0197 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 0.001 .238 0.003 .0020E .280 .0130 .0030 .0170 0.001 .561 0.003 .0020E .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020E .0197 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020E .280 .0130 .0030 .0170 .0.01 .561 0.003 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 E .0197 .0130 .0030 .0170 .0010 .0040 .0290 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0010 .0040 .0030 .0020E .0197 .0130 .0030 .0170 .0010 .0040E .0290 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 | | | | | | | | |
| .0020E .0197 .0130 .0030 .0170 .0010 .0040E .0290 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0202 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0017 .0010 .0040 .0030 .002 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .999 . | | | | | | | | |
| .0020 .0030 .0130 .0030 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0920 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0920 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .99 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .999 .999 .999 .999 .999 .999 .999 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0999 .999 | | | | | | | | |
| .0020 .0030 .0130 .0030 .0170 .0010 .0030 .999 .9030 .0030 .0030 .0030 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .0010 .0040 .0030 .0030 .0030 .0010 .0040 .0030 .0030 .002 .0030 .002 .0030 .002 .0030< | | | | | | | | |
| -999 -999 <t< td=""><td>.0020<</td><td></td><td>.0130<</td><td>.0030<</td><td>.0170<</td><td>.0010<</td><td>.0040<</td><td>.0030<</td></t<> | .0020< | | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 . | .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .099 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 | -999 | | | | | -999 | -999 | -999 |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 .999 . | .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| .0020 .0030 .0130 .0030 .0170 .0010 .0040 .0030 -999 | .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| -999 -999 <td< td=""><td>.0020<</td><td>.0030<</td><td>.0130<</td><td>.0030<</td><td>.0170<</td><td>.0010<</td><td>.0040<</td><td>.0030<</td></td<> | .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| -999 -999 <td< td=""><td>.0020<</td><td>.0030<</td><td>.0130<</td><td>.0030<</td><td>.0170<</td><td>.0010<</td><td>.0040<</td><td>.0030<</td></td<> | .0020< | .0030< | .0130< | .0030< | .0170< | .0010< | .0040< | .0030< |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td></td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td></td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td></td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <td< td=""><td><.002</td><td><.003</td><td><.013</td><td><.003</td><td><.017</td><td><.001</td><td><.004</td><td><.003</td></td<> | <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |
| -999 -999 <td< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></td<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <th< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></th<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 -999 <th< td=""><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td><td>-999</td></th<> | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 <.003 <.013 <.003 <.017 <.001 <.004 <.003 | -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 <.003 <.013 <.003 <.017 <.001 <.004 <.003 | <.002 | <.003 | <.013 | <.003 | E.013 | <.001 | <.004 | <.003 |
| | <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |
| | <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |

| | | FILTERED | FILTERED | | FILTERED | FILTERED | FILTERED |
|-----------------|---------|----------------|----------|----------|----------|----------|----------|
| FILTERED | | | | | | | CARBARY |
| BENFLUR/ | CARBOFU | 0.7 | 0.7 | DISULFOT | 0.7 | 0.7 | 0.7 |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) |
| #82673 | #82674 | #82675 | #82676 | #82677 | #82678 | #82679 | #82680 |
| | | <.013 | <.003 | <.017 | <.001 | 0.12 | <.003 |
| | | -999 | | | | | |
| <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |
| -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 | -999 |
| | | | | | | | |
| | | <.013 | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |
| | | | | <.017 | | | |
| <.002 | E.074 | <.013 <.013 | <.003 | <.017 | <.001 | 0.33 | <.003 |
| | | | | | | | |
| | | -999 | | | | | |
| | | <.013 | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| | | -999 | | | | | |
| <.002 | | <.013 | | | | | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | -999 |
| -999 | | -999 | | | | | |
| <.002 | <.003 | <.013 | <.003 | | | | |
| <.002 | E.085 | <.013 | <.003 | <.017 | <.001 | <.004 | |
| <.002 | <.003 | <.013 | <.003 | <.017 | <.001 | 0.02 | <.003 |
| | | <.013 | <.003 | <.017 | <.001 | 0.032 | E.009 |
| | | -999 | | | | | |
| <.002 | <.04 | <.013 | <.003 | <.017 | <.001 | <.004 | <.003 |
| | | | | | | | |

| | FILTERED | | | | | | |
|-----------------|----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----|
| FILTERED | DCPA | FILTERED | FILTERED | FILTERED | METHYL | FILTERED | |
| THIOBENO | 0.7 REC | PENDIME1 | NAPROPA | PROPARG | AZINPHOS | PERMETH | RIN |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | |
| #82681 | #82682 | | #82684 | #82685 | #82686 | #82687 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0200< | | .150< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| -999 | -999 | -999 | -999 | | -999 | -999 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020E | .0008< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |

| | FILTERED | | | | | | |
|-----------------|----------|--------|----------|----------|--------|----------|--|
| FILTERED | | | FILTERED | FILTERED | METHYL | FILTERED | |
| THIOBENO | | | | | | PERMETH | |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | |
| | #82682 | | #82684 | #82685 | #82686 | #82687 | |
| .0020< | .0020E | .0236< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | | .0468< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0611< | | .0716< | .0030< | .0130< | .0010< | 0.005 | |
| .0488E | | .330< | .0030< | .0130< | .0010< | 0.005 | |
| .0034< | | .0353< | .0030< | .0130< | .0010< | 0.005 | |
| .0162< | | .0215< | .0030< | .0130< | .0010< | 0.005 | |
| .0411< | | .0619< | .0030< | .0130< | .0010< | 0.005 | |
| .0296E | | .0866< | .0030< | .0130< | .0010< | 0.005 | |
| .0050< | 0.002 | | | .0130< | .0010< | 0.005 | |
| .0020< | | .0906< | .0030< | .0130< | .0010< | 0.005 | |
| | .0273< | .0040< | | .0606< | .0010< | 0.005 | |
| .0020< | .0020< | .0200< | .0030< | .0130< | .0010< | 0.005 | |
| .0020E | .0032< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020E | .0013< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0100< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| -999 | -999 | -999 | -999 | | | -999 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| .0020< | .0020< | .0040< | .0030< | .0130< | .0010< | 0.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | | -999 | | | | |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | | | | |
| -999 | -999 | -999 | -999 | | | | |
| -999 | -999 | -999 | -999 | | | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| <.002 <.002 | | | | | | | |
| | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |

| | FILTERED | | | | | | |
|-----------------|----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----|
| FILTERED | DCPA | FILTERED | FILTERED | FILTERED | METHYL | FILTERED | |
| THIOBENO | 0.7 REC | PENDIME1 | NAPROPA | PROPARG | AZINPHOS | PERMETH | RIN |
| (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | (ug/l) | |
| #82681 | #82682 | #82683 | #82684 | #82685 | #82686 | #82687 | |
| 0.099 | <.002 | 0.15 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | E.002 | <.004 | <.003 | <.013 | <.001 | E.002 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| <.002 | <.002 | E.032 | <.003 | <.013 | <.001 | <.005 | |
| 0.276 | <.002 | 0.232 0.019 | <.003 | <.013 | <.001 | <.005 | |
| 0.018 | <.002 | 0.019 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| 0.011 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| | | -999 | | | | | |
| | | -999 | | | | | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | <.002 | <.004 0.083 | <.003 | <.013 | <.001 | <.005 | |
| <.002 | <.002 | 0.083 | <.003 | <.013 | <.001 | <.005 | |
| <.002 | <.002 | <.004 | <.003 | <.013 | <.001 | <.005 | |
| 1.06 | <.002 | 0.169 | <.003 | <.013 | <.001 | <.005 | |
| -999 | -999 | -999 | -999 | -999 | -999 | -999 | |
| <.002 | 0.015 | <.02 | <.003 | <.013 | <.001 | <.005 | |
| | | | | | | | |

| RESIDUE | Table B5. Se | lected v | vater quality | data for the N | Aississippi Riv | er at Thebes, | IL. | | | | | | | | |
|--|--------------|----------|---------------|----------------|-----------------|---------------|---------|------------|---------|---------|---------|---------|----------|---------|---------|
| TOTAL NITRO- NI | | | | | | , | | NITRO- | | | | | | | NITRO- |
| Turn | | | | | NITRO- | NITRO- | | | | PHOS- | IRON. | | NITRO- | NITRO- | |
| DATE TIME BID. SUS- TOTAL TOTAL TOTAL TOTAL MOSIL | | | | | GEN, | | AMMONIA | | PHOS- | PHORUS | , | NITRO- | | GEN | ORGANIC |
| | | | TUR- | DEG. C, | NO2+NO3 | AMMONIA | UN- | ORGANIC | PHORUS | DIS- | RECOV- | GEN | DIS- | ORGANIC | DIS- |
| NTU (MGL) AS N AS P AS F AS F AS N | DATE | TIME | BID- | SUS- | TOTAL | TOTAL | IONIZED | TOTAL | TOTAL | SOLVED | ERABLE | TOTAL | SOLVED | TOTAL | SOLVED |
| COCO76 COCO30 COCO30 COCO610 COCO610 COCO65 COCO665 COCO666 CO10 COCO60 COCOC0 COCOC05 CO | | | ITY | PENDED | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (uG/L) | (MG/L | (MG/L | (MG/L | (MG/L |
| 11/02/1994 700 9.7 83 1.66 0.06 <.001 0.75 0.18 0.11 1900 | | | (NTU) | (MG/L) | AS N) | AS N) | AS N) | AS N) | AS P) | AS P) | AS FE) | AS N) | AS N) | AS N) | AS N) |
| 01/12/1995 900 4.7 47 1.87 0.19 0.003 0.94 0.15 0.06 1200 | | | (00076) | (OO530) | (OO630) | (OO610) | (OO619) | (OO625) | (OO665) | (OO666) | (O1O45) | (00600) | (OO6O2) | (00605) | (00607) |
| 03/21/1995 900 13 | 11/02/1994 | 700 | 9.7 | 83 | 1.66 | 0.06 | <.001 | 0.75 | 0.18 | 0.11 | 1900 | | | | |
| 05/23/1995 1030 49 250 1.8 0.09 0.001 0.95 0.34 0.08 11000 | 01/12/1995 | 900 | 4.7 | 47 | 1.87 | 0.19 | 0.003 | 0.94 | 0.15 | 0.06 | 1200 | | | | |
| 07/27/1995 900 27 306 3.5 <.01 <.001 0.85 0.3 0.11 5900 | 03/21/1995 | 900 | 13 | 138 | | 0.15 | 0.003 | 1.5 | | 0.05 | 3100 | | | | |
| 09/06/1995 900 | 05/23/1995 | | 49 | 250 | | 0.09 | 0.001 | 0.95 | | | | | | | |
| 11/06/1995 1530 24 1.1 0.6 0.16 0.1 1.7 1.6 0.56 11/27/1995 1400 22 2 0.7 0.19 0.09 2.7 2.5 0.62 12/12/1995 1400 22 2 0.7 0.19 0.09 2.7 2.5 0.62 12/12/1996 1525 32 2.1 0.9 0.24 0.09 3 2.6 0.7 02/20/1996 1540 36 2.2 1.1 0.27 0.13 3.3 3 0.78 03/12/1996 1500 74 2.1 1.1 0.28 0.13 3.2 2.8 0.87 03/12/1996 1530 25 1.6 0.8 0.16 0.11 2.4 2 0.77 03/12/1996 1540 36 1.7 0.8 0.18 0.11 2.4 2 0.77 04/22/1996 1450 36 1.7 0.8 0.18 | | | | 306 | | <.01 | | 0.85 | | | | | | | |
| 11/27/1995 | | _ | | 172 | | 0.11 | 0.007 | | | | 3400 | | | | |
| 12/12/1995 947 4.6 1.9 0.7 0.05 0.07 2.6 2.3 0.7 | 11/06/1995 | - | | | | | | | | | | | . | 0.56 | 0.46 |
| 01/22/1996 1525 32 2.1 0.9 0.24 0.09 3 2.6 0.7 02/20/1996 1540 36 2.2 1.1 0.27 0.13 3.3 3 0.78 03/21/1996 1500 74 2.1 1.1 0.28 0.13 3.2 2.8 0.87 03/26/1996 1330 25 1.6 0.8 0.16 0.11 2.4 2 0.77 04/08/1996 1540 36 1.7 0.8 0.18 0.07 2.5 2.2 0.8 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1540 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.7 0.19 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2 2.3 1.4 0.09 4.3 2.6 2.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 | | _ | | | | | | | | | | | | | |
| 02/20/1996 1540 36 2.2 1.1 0.27 0.13 3.3 3 0.78 03/12/1996 1500 74 2.1 1.1 0.28 0.13 3.2 2.8 0.87 03/26/1996 1330 25 1.6 0.8 0.16 0.11 2.4 2 0.77 04/08/1996 1540 36 1.7 0.8 0.18 0.07 2.5 2.2 0.8 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.46 0.08 4.1 3 1.6 07/17/1996 1620 110 3.5 0.16 0.11 | 12/12/1995 | _ | | | | | | | | | | | | | |
| 03/12/1996 1500 74 2.1 1.1 0.28 0.13 3.2 2.8 0.87 03/26/1996 1330 25 1.6 0.8 0.16 0.11 2.4 2 0.77 04/02/1996 1540 36 1.7 0.8 0.18 0.07 2.5 2.2 0.8 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.46 0.08 4.1 3 1.6 07/17/1996 1520 110 3.5 1.6 0.66 0.13 5.1 3.9 1.6 07/17/1996 150 31 2 0.7 0.19 | | | | | | | | | | | | | | | |
| 03/26/1996 1330 25 1.6 0.8 0.16 0.11 2.4 2 0.77 04/08/1996 1540 36 1.7 0.8 0.18 0.07 2.5 2.2 0.8 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/02/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 | | | | | | | | | | | | | | | - |
| 04/08/1996 1540 36 1.7 0.8 0.18 0.07 2.5 2.2 0.8 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 <td></td> | | | | | | | | | | | | | | | |
| 04/22/1996 1455 27 1.6 0.9 0.23 0.08 2.5 2 0.83 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 </td <td></td> <td>.</td> <td>-</td> <td></td> | | | | | | | | | | | | | . | - | |
| 05/06/1996 1545 83 1.4 1.2 0.38 0.09 2.6 1.9 1.2 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 </td <td></td> <td>.</td> <td></td> <td>-</td> | | | | | | | | | | | | | . | | - |
| 05/22/1996 1610 82 2.5 1.6 0.46 0.08 4.1 3 1.6 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 <td></td> | | | | | | | | | | | | | | | |
| 06/17/1996 1520 110 3.5 1.6 0.56 0.13 5.1 3.9 1.6 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38< | | - | | | | | | | | | | | _ | | |
| 07/17/1996 1610 24 3.1 0.6 0.16 0.11 3.7 3.5 0.56 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 </td <td></td> <td>_</td> <td></td> <td>_</td> <td></td> <td>-</td> | | _ | | | | | | | | | | | _ | | - |
| 08/12/1996 1450 31 2 0.7 0.19 0.11 2.7 2.3 0.66 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714< | | | | | | | | | | | | | . | | |
| 09/09/1996 1500 39 1.2 0.5 0.16 0.11 1.7 1.6 0.47 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | | |
| 10/21/1996 1530 20 0.78 0.6 0.15 0.06 1.4 1.1 0.52 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | _ | | | | | | | | | | | | | - |
| 12/16/1996 1530 24 2.1 0.7 0.18 0.07 2.8 2.5 0.59 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | | |
| 01/27/1997 1425 39 2.2 1 0.23 0.08 3.2 2.9 0.74 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | | |
| 02/24/1997 1515 380 2 2.3 1.4 0.09 4.3 2.6 2.1 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | - | | | | | | | | | | | | | |
| 03/12/1997 1430 72 2.4 1.4 0.38 0.08 3.8 3 1.1 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | | |
| 03/26/1997 1700 55 2.55 1.2 0.404 0.126 3.7 3.1 1 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | + | 0.41 |
| 04/15/1997 1315 0.8 2.36 1.6 0.714 0.069 4 2.8 1.6 | | | | | | | | | | | | | | | - |
| | | | | | | | | | | | | | | | |
| | 04/15/1997 | | 0.8 78 | | 2.36 | | | 1.6 1.2 | | | | 3.3 | | | |

| | | | RESIDUE | | | | NITRO- | | | | | | | NITRO- |
|--------------------------|--------------|-----------|---------|--------------|---------|---------|----------|----------------|---------------|---------|------------|---------|----------|---------|
| | | | TOTAL | NITRO- | NITRO- | | GEN, AM- | | PHOS- | IRON, | | NITRO- | NITRO- | GEN |
| | | | AT 105 | GEN, | GEN, | AMMONIA | MONIA + | PHOS- | PHORUS | TOTAL | NITRO- | GEN | GEN | ORGANIC |
| | | TUR- | DEG. C, | NO2+NO3 | AMMONIA | UN- | ORGANIC | PHORUS | DIS- | RECOV- | GEN | DIS- | ORGANIC | DIS- |
| DATE | TIME | BID- | SUS- | TOTAL | TOTAL | IONIZED | TOTAL | TOTAL | SOLVED | ERABLE | TOTAL | SOLVED | TOTAL | SOLVED |
| | | ITY | PENDED | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (uG/L) | (MG/L | (MG/L | (MG/L | (MG/L |
| | | (NTU) | (MG/L) | AS N) | AS N) | AS N) | AS N) | AS P) | AS P) | AS FE) | AS N) | AS N) | AS N) | AS N) |
| | | (00076) | (OO530) | (OO630) | (OO610) | (OO619) | (OO625) | (OO665) | (OO666) | (O1O45) | (00600) | (00602) | (00605) | (00607) |
| 05/22/1997 | 1600 | 0.3 | | 2.42 | | | 0.85 | 0.238 | 0.07 | | 3.3 | 2.8 | 0.79 | 0.37 |
| 06/11/1997 | 1535 | 30 | | 2.55 | | | 0.84 | 0.186 | 0.071 | | 3.4 | 2.9 | 0.8 | 0.32 |
| 07/09/1997 | 1600 | 60 | | 3.03 | | | 0.38 | 0.174 | 0.165 | | 3.4 | 3.4 | 0.38 | |
| 07/21/1997 | 1520 | 42 | | 1.96 | | | 0.77 | 0.259 | 0.105 | | 2.7 | | 0.77 | • |
| 08/13/1997 | 1540 | | | 1.31 | | | 0.73 | | 0.093 | | 2 | 1.7 | | - |
| 08/20/1997 | 1450 | 19 | | 0.91 | | | 0.79 | | 0.093 | | 1.7 | 1.4 | | |
| 09/17/1997 | 1530 | 27 | | <.05 | | | 0.52 | | 0.086 | | 0.52 | | 0.52 | - |
| 10/20/1997 | 1600 | 25 | | 0.905 | | | 0.55 | | 0.096 | | 1.5 | | 0.52 | |
| 11/24/1997 | 1545 | 15 | | 1.45 | | | 0.37 | 0.063 | 0.07 | | 1.8 | | . | |
| 01/07/1998 | 1325 | 38 | | 1.71 | | | 0.78 | | 0.092 | | 2.5 | | 0.74 | |
| 02/02/1998 | 1520 | 12 | | 1.38 | | | 0.55 | | 0.057 | | 1.9 | | | - |
| 03/04/1998 | 1325 | 72 | | 2.93 | | | 0.21 | 0.692 | 0.1 | | 3.1 | 3.3 | | - |
| 03/24/1998 | 1255 | 140 | | 2.14 | | | 0.73 | | 0.07 | | 2.9 | | | |
| 04/16/1998 | 1350 | 100 | | 3.64 | | | 1.2 | | 0.089 | | 4.9 | | 1.2 | - |
| 05/07/1998 | 1055 | 52 | | 3.59 | | | 1 | 0.329 | 0.082 | | 4.6 | | | 0.4 |
| 05/21/1998 | 930 | 26 | | 4.18 | | | 0.91 | 0.255 | 0.096 | | 5.1 | 4.6 | | 0.4 |
| 06/10/1998 | 1410 | 96 | | 3.78 | | | 0.62 | 0.205 | 0.135 | | 4.4 | 4.3 | | 0.44 |
| 06/22/1998 07/22/1998 | 1525 1610 | 300 65 | | 4.09 3.22 | | | 1.7 | 0.646 0.435 | 0.12 0.143 | | 5.8 4.3 | | | 0.41 |
| | 1040 | 54 | | 1.97 | | | 0.77 | | 0.143 | | 2.7 | 2.3 | | 0.00 |
| 08/11/1998 08/26/1998 | 1335 | 24 | | 1.97 | | | 0.77 | 0.263 0.229 | 0.116 | | 2.7 | 2.3 | | 0.28 |
| 08/26/1998 | 1335 | 27 | | 1.86 | | | 0.33 | | 0.133 | | 1.8 | | | |
| 09/09/1998 | 1330 | 21 | | 1.10 | | | 0.69 | 0.255 | 0.139 | | 1.8 | 1.5 | | |

| | | | DEOIDUE | | | | NITDO | | | | | | | NITDO |
|----------|------|-----------|-----------|-----------|------------|------------|-----------|-------------|-------------|-------------|-------------|-------------|----------|----------|
| | | | RESIDUE | NITEO | NUTDO | | NITRO- | | 51100 | 10011 | | NUTDO | NUTDO | NITRO- |
| | | | | NITRO- | NITRO- | | GEN, AM- | | PHOS- | IRON, | | NITRO- | NITRO- | GEN |
| | | | | GEN, | , | AMMONIA | MONIA + | PHOS- | PHORUS | TOTAL | NITRO- | GEN | GEN | ORGANIC |
| | | | , | NO2+NO3 | | UN- | ORGANIC | PHORUS | DIS- | RECOV- | GEN | DIS- | ORGANIC | DIS- |
| DATE | TIME | BID- | SUS- | TOTAL | TOTAL | IONIZED | TOTAL | TOTAL | SOLVED | ERABLE | TOTAL | SOLVED | TOTAL | SOLVED |
| | | ITY | PENDED | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (uG/L) | (MG/L | (MG/L | (MG/L | (MG/L |
| | | (NTU) | (MG/L) | AS N) | AS N) | AS N) | AS N) | AS P) | AS P) | AS FE) | AS N) | AS N) | AS N) | AS N) |
| | | (00076) | (OO530) | (OO630) | (OO610) | (OO619) | (OO625) | (OO665) | (OO666) | (O1O45) | (00600) | (OO6O2) | (OO6O5) | (00607) |
| | | | RESIDUE | | | | NITRO- | | | | | | | NITRO- |
| | | | TOTAL | NITRO- | NITRO- | | GEN, AM- | | PHOS- | IRON, | | NITRO- | NITRO- | GEN |
| | | | AT 105 | GEN, | GEN, | AMMONIA | MONIA + | PHOS- | PHORUS | TOTAL | NITRO- | GEN | GEN | ORGANIC |
| | | TUR- | DEG. C, | NO2+NO3 | AMMONIA | UN- | ORGANIC | PHORUS | DIS- | RECOV- | GEN | DIS- | ORGANIC | DIS- |
| DATE | TIME | BID- | SUS- | TOTAL | TOTAL | IONIZED | TOTAL | TOTAL | SOLVED | ERABLE | TOTAL | SOLVED | TOTAL | SOLVED |
| | | ITY | PENDED | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (uG/L) | (MG/L | (MG/L | (MG/L | (MG/L |
| | | (NTU) | (MG/L) | AS N) | AS N) | AS N) | AS N) | AS P) | AS P) | AS FE) | AS N) | AS N) | AS N) | AS N) |
| | | (00076) | (OO530) | (OO630) | (OO610) | (OO619) | (OO625) | (OO665) | (OO666) | (O1O45) | (00600) | (00602) | (OO6O5) | (00607) |
| | | | | | | | | | | | | | | |
| Mean | | 53.006 | 166 | 2.2470408 | 0.12 | 0.0035 | 0.9045098 | 0.29328 | 0.096392157 | 4416.666667 | 3.04044444 | 2.653488372 | 0.836098 | 0.369412 |
| Std Dev. | | 67.014757 | 98.514973 | 0.9141685 | 0.0509902 | 0.00251661 | 0.3951977 | 0.217070292 | 0.026225239 | 3605.227686 | 1.130233193 | 0.89505223 | 0.401689 | 0.070494 |
| Std. Err | | 9.4773179 | 40.21857 | 0.1305955 | 0.02280351 | 0.00125831 | 0.0553388 | 0.030698375 | 0.003672268 | 1471.828039 | 0.168485217 | 0.136494185 | 0.062733 | 0.01209 |
| 95% CI | | 19.045747 | 103.38634 | 0.2625849 | 0.06331121 | 0.0040036 | 0.1111533 | 0.061691874 | 0.007376108 | 3783.499016 | 0.339566161 | 0.275461717 | 0.126791 | 0.024597 |
| 99% CI | | 25.400557 | 162.16838 | 0.3503087 | 0.10496215 | 0.00733687 | 0.1481962 | 0.082276004 | 0.009834271 | 5934.670796 | 0.453641493 | 0.368296749 | 0.169672 | 0.033046 |
| size | | 51 | 6 | 51 | 6 | 6 | 51 | 51 | 51 | 6 | 51 | 51 | 49 | 49 |
| Min | | 0.3 | 47 | 0.78 | 0.06 | 0.001 | 0.21 | 0.05 | 0.05 | 1200 | 0.52 | 1.1 | 0.14 | 0.2 |
| Max | | 380 | 306 | 4.6 | 0.19 | 0.007 | 2.3 | 1.4 | 0.165 | 11000 | 5.8 | 4.6 | 2.1 | 0.48 |
| Missing | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _ |
| Other | | 1 | 0 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 6 | 8 | 8 | 15 |

| Table B5. Sel | ected v | 1 | | | | | | | | | | | |
|---------------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|----------|
| | | NITRO- | NITRO- | NITRO- | | NITRO- | NITRO- | PHOS- | PHOS- | | CARBON, | SOLIDS. | |
| | | GEN, | GEN, | GEN, | NITRO- | GEN, AM- | GEN, | PHATE, | PHORUS | CARBON, | ORGANIC | RESIDUE | |
| | | AMMONIA | NITRITE | NITRATE | GEN, | MONIA + | NO2+NO3 | ORTHO, | ORTHO, | ORGANIC | SUS- | AT 180 | SEDI- |
| | | DIS- | DIS- | DIS- | NITRATE | ORGANIC | DIS- | DIS- | DIS- | DIS- | PENDED | DEG. C | MENT |
| DATE | TIME | SOLVED | SOLVED | SOLVED | TOTAL | DIS. | SOLVED | SOLVED | SOLVED | SOLVED | TOTAL | SDIS- | SUS- |
| | | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | SOLVED | PENDED |
| | | AS N) | AS N) | AS PO4) | AS P) | AS C) | AS C) | (MG/L) | (MG/L) |
| | | (OO6O8) | (OO613) | (OO618) | (OO62O) | (OO623) | (OO631) | (OO66O) | (OO666) | (OO681) | (OO681) | (70300) | (8O154) |
| 11/02/1994 | 700 | | | | | | | | | | | | |
| 01/12/1995 | 900 | | | | | | | | | | | | |
| 03/21/1995 | 900 | | | | | | | | | | | | |
| 05/23/1995 | 1030 | | | | | | | | | | | | |
| 07/27/1995 | 900 | | | | | | | | | | | | |
| 09/06/1995 | 900 | | | | | | | | | | | | |
| 11/06/1995 | 1530 | 0.04 | 0.01 | 1.09 | 1.09 | 0.5 | 1.1 | 0.25 | 0.08 | 6 | 0.7 | 348 | 133 |
| 11/27/1995 | 1400 | 0.08 | 0.01 | 1.99 | 1.99 | 0.5 | 2 | 0.28 | 0.09 | 5.2 | 0.6 | 393 | 124 |
| 12/12/1995 | 947 | <.015 | 0.01 | 1.89 | 1.89 | 0.4 | 1.9 | 0.15 | 0.05 | 4.8 | 0.6 | 428 | 116 |
| 01/22/1996 | 1525 | 0.2 | 0.02 | 2.08 | 2.08 | 0.5 | 2.1 | 0.28 | 0.091 | 4.9 | 1.4 | 417 | 132 |
| 02/20/1996 | 1540 | 0.32 | 0.04 | 2.16 | 2.16 | 0.8 | 2.2 | 0.37 | 0.12 | | | 366 | |
| 03/12/1996 | 1500 | 0.23 | 0.03 | 2.07 | 2.07 | 0.7 | 2.1 | 0.25 | 0.08 | 4.9 | 2.6 | 349 | 222 |
| 03/26/1996 | 1330 | 0.03 | 0.02 | 1.58 | 1.58 | 0.4 | 1.6 | 0.29 | 0.093 | | | | |
| 04/08/1996 | 1540 | <.015 | 0.02 | 1.68 | 1.68 | 0.5 | 1.7 | 0.21 | 0.068 | 4.5 | 2.6 | 280 | 150 |
| 04/22/1996 | 1455 | 0.07 | 0.02 | 1.58 | 1.58 | 0.4 | 1.6 | 0.29 | 0.094 | | | | |
| 05/06/1996 | 1545 | 0.04 | 0.03 | 1.37 | 1.37 | 0.5 | 1.4 | 0.22 | 0.072 | | 1 | 224 | |
| 05/22/1996 | 1610 | | 0.06 | | 2.44 | 0.5 | 2.5 | | | 5.1 | | 235 | |
| 06/17/1996 | 1520 | 0.03 | 0.03 | 3.47 | 3.47 | 0.4 | 3.5 | 0.31 | 0.1 | 4.5 | 1 | | |
| 07/17/1996 | 1610 | 0.04 | 0.02 | 3.08 | 3.08 | 0.4 | 3.1 | 0.4 | 0.13 | | 1 | 357 | |
| 08/12/1996 | 1450 | 0.04 | | 1.97 | 1.97 | 0.3 | 2 | | 0.1 | 3.9 | | | |
| 09/09/1996 | 1500 | 0.03 | | 1.15 | 1.15 | 0.4 | 1.2 | 0.34 | | 3.7 | - | | |
| 10/21/1996 | 1530 | 0.08 | 0.03 | 0.75 | | 0.3 | | 0.23 | 0.074 | 4.7 | - | | |
| 12/16/1996 | 1530 | 0.11 | 0.02 | 2.08 | | 0.4 | | 0.26 | | | 1 | | |
| 01/27/1997 | 1425 | 0.26 | | 2.17 | | 0.7 | | 0.27 | 0.088 | 4.8 | | | |
| 02/24/1997 | 1515 | 0.19 | 0.02 | | | 0.6 | | 0.22 | | | | 308 | |
| 03/12/1997 | 1430 | 0.25 | 0.03 | | | 0.6 | | 0.37 | 0.12 | | | 248 | 397 |
| 03/26/1997 | 1700 | 0.14 | | | | 0.6 | | 0.23 | | | | | |
| 04/15/1997 | 1315 | 0.04 | | | | 0.4 | | 0.27 | 0.089 | | | | |
| 04/28/1997 | 1525 | 0.03 | 0.02 | 2.07 | | 0.5 | | 0.19 | 0.062 | 4.8 | 2.6 | 275 | <u> </u> |

| | | NITRO- | NITRO- | NITRO- | | NITRO- | NITRO- | PHOS- | PHOS- | | CARBON, | SOLIDS, | |
|------------|------|---------|---------|---------|---------|----------|---------|---------|---------|---------|----------|---------|---------|
| | | GEN. | GEN. | GEN. | NITRO- | GEN, AM- | GEN, | PHATE, | PHORUS | CARBON. | , | RESIDUE | |
| | | AMMONIA | NITRITE | NITRATE | GEN. | MONIA + | NO2+NO3 | ORTHO, | ORTHO, | ORGANIC | SUS- | AT 180 | SEDI- |
| | | DIS- | DIS- | DIS- | NITRATE | ORGANIC | DIS- | DIS- | DIS- | DIS- | PENDED | DEG. C | MENT |
| DATE | TIME | SOLVED | SOLVED | SOLVED | TOTAL | DIS. | SOLVED | SOLVED | SOLVED | SOLVED | TOTAL | SDIS- | SUS- |
| | | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | (MG/L | SOLVED | PENDED |
| | | AS N) | AS N) | AS PO4) | AS P) | AS C) | AS C) | (MG/L) | (MG/L) |
| | | (OO6O8) | (OO613) | (OO618) | (00620) | (OO623) | (OO631) | (OO66O) | (OO666) | (OO681) | (OO681) | (70300) | (8O154) |
| 05/22/1997 | 1600 | 0.06 | 0.02 | 2.4 | | 0.4 | | 0.25 | 0.081 | 4.9 | 0.7 | 354 | 254 |
| 06/11/1997 | 1535 | 0.03 | 0.03 | 2.52 | | 0.4 | | 0.25 | 0.083 | 6.1 | 0.6 | 360 | 165 |
| 07/09/1997 | 1600 | <.01 | 0.02 | 3.01 | | 0.4 | | 0.43 | 0.14 | 4.1 | 1.1 | 384 | 285 |
| 07/21/1997 | 1520 | <.01 | 0.02 | 1.94 | | <.02 | | 0.39 | 0.128 | 4.2 | 1 | 380 | 186 |
| 08/13/1997 | 1540 | <.01 | 0.02 | 1.29 | | 0.4 | | 0.27 | 0.089 | 4.2 | 0.9 | 385 | 126 |
| 08/20/1997 | 1450 | 0.03 | 0.02 | 0.9 | | 0.5 | | 0.27 | 0.089 | 4.4 | 0.6 | 405 | 127 |
| 09/17/1997 | 1530 | <.01 | <.01 | | | 0.3 | | 0.34 | 0.11 | 3.8 | 1.1 | 406 | 138 |
| 10/20/1997 | 1600 | 0.031 | 0.016 | 0.889 | | 0.23 | | 0.29 | 0.095 | 4.2 | 0.9 | 394 | 157 |
| 11/24/1997 | 1545 | 0.086 | 0.021 | 1.42 | | 0.38 | | 0.31 | 0.1 | 4 | | 417 | 160 |
| 01/07/1998 | 1325 | 0.041 | <.01 | | | 0.44 | | 0.27 | 0.089 | 3.9 | 1.8 | 341 | 287 |
| 02/02/1998 | 1520 | 0.12 | 0.02 | 1.36 | | 0.47 | | 0.24 | 0.078 | 4 | 0.9 | 406 | 125 |
| 03/04/1998 | 1325 | 0.07 | 0.015 | 2.92 | | 0.41 | | 0.29 | 0.096 | 4.4 | + | 308 | 330 |
| 03/24/1998 | 1255 | 0.153 | 0.015 | 2.12 | | 0.47 | | 0.2 | | 5.2 | | 224 | 739 |
| 04/16/1998 | 1350 | 0.071 | 0.044 | | | 0.49 | | 0.25 | | 4.6 | | 260 | 604 |
| 05/07/1998 | 1055 | 0.039 | | 3.54 | | 0.44 | | 0.25 | | 4.6 | _ | 304 | 348 |
| 05/21/1998 | 930 | 0.029 | | | | 0.43 | | 0.27 | 0.088 | 4.1 | + | 347 | 198 |
| 06/10/1998 | 1410 | <.02 | 0.045 | | | 0.47 | | 0.36 | | 4.3 | + | 307 | 472 |
| 06/22/1998 | 1525 | 0.043 | 0.011 | 4.08 | | 0.45 | | 0.41 | 0.134 | 3.8 | + | 268 | 1510 |
| 07/22/1998 | 1610 | <.02 | 0.016 | | | 0.43 | | 0.5 | | 6.6 | | 314 | 329 |
| 08/11/1998 | 1040 | 0.083 | 0.02 | 1.95 | | 0.36 | | 0.38 | | 4.2 | | 291 | 244 |
| 08/26/1998 | 1335 | <.02 | 0.014 | 1.85 | | 0.5 | | 0.39 | | 4.5 | | 354 | 144 |
| 09/09/1998 | 1330 | <.02 | 0.014 | 1.14 | | 0.37 | | 0.44 | 0.144 | 4.1 | 1.1 | 357 | 160 |
| | | | | | | | | | | | | | |

| | | NITRO- | NITRO- | NITRO- | | NITRO- | NITRO- | PHOS- | PHOS- | | CARBON. | SOLIDS. | |
|----------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | GEN. | GEN, | GEN, | NITRO- | GEN, AM- | GEN. | PHATE, | PHORUS | CARBON, | , | RESIDUE | |
| | | AMMONIA | NITRITE | NITRATE | GEN, | MONIA + | NO2+NO3 | ORTHO, | ORTHO, | ORGANIC | SUS- | AT 180 | SEDI- |
| | | DIS- | DIS- | DIS- | NITRATE | ORGANIC | DIS- | DIS- | DIS- | DIS- | PENDED | DEG. C | MENT |
| DATE | TIME | SOLVED | SOLVED | SOLVED | TOTAL | DIS. | SOLVED | SOLVED | SOLVED | SOLVED | TOTAL | SDIS- | SUS- |
| | | (MG/L | SOLVED | PENDED |
| | | AS N) | AS PO4) | AS P) | AS C) | AS C) | (MG/L) | (MG/L) |
| | | (00608) | (OO613) | (OO618) | (OO62O) | (OO623) | (OO631) | (OO66O) | (OO666) | (OO681) | (OO681) | (70300) | (8O154) |
| | | NITRO- | NITRO- | NITRO- | | NITRO- | NITRO- | PHOS- | PHOS- | | CARBON, | SOLIDS, | |
| | | GEN, | GEN, | GEN, | NITRO- | GEN, AM- | GEN, | PHATE, | PHORUS | CARBON, | ORGANIC | RESIDUE | |
| | | AMMONIA | NITRITE | NITRATE | GEN, | MONIA + | NO2+NO3 | ORTHO, | ORTHO, | ORGANIC | SUS- | AT 180 | SEDI- |
| | | DIS- | DIS- | DIS- | NITRATE | ORGANIC | DIS- | DIS- | DIS- | DIS- | PENDED | DEG. C | MENT |
| DATE | TIME | SOLVED | SOLVED | SOLVED | TOTAL | DIS. | SOLVED | SOLVED | SOLVED | SOLVED | TOTAL | SDIS- | SUS- |
| | | (MG/L | SOLVED | PENDED |
| | | AS N) | AS PO4) | AS P) | AS C) | AS C) | (MG/L) | (MG/L) |
| | | (00608) | (OO613) | (OO618) | (OO62O) | (OO623) | (OO631) | (00660) | (OO666) | (OO681) | (OO681) | (70300) | (8O154) |
| | | | | | | | | | | | | | |
| Mean | | 0.092235 | 0.025721 | 2.182535 | 1.973333 | 0.455455 | 2 | | 0.096422 | 4.662222 | 2.145455 | 337.0222 | |
| Std Dev. | | 0.079303 | 0.012633 | | 0.652628 | | 0.654654 | | 0.024026 | 0.638638 | | 55.65947 | |
| Std. Err | | 0.0136 | 0.001926 | | 0.168508 | 0.016368 | | 0.011016 | | 0.095203 | 0.276348 | 8.297224 | |
| 95% CI | | 0.027671 | 0.003888 | 0.267103 | 0.361421 | 0.03301 | 0.362543 | 0.022203 | 0.007218 | 0.191872 | 0.55732 | 16.72228 | 103.5477 |
| 99% CI | | 0.037176 | 0.005198 | | 0.501663 | 0.044117 | 0.50322 | 0.029662 | 0.009643 | 0.25633 | 0.74484 | 22.34003 | |
| size | | 49 | 51 | 51 | 21 | 51 | 21 | 51 | 51 | 51 | 51 | 51 | 51 |
| Min | | 0.029 | 0.01 | 0.75 | 1.09 | | | 0.15 | | 3.7 | 0.2 | 224 | |
| Max | | 0.32 | 0.06 | | 3.47 | 0.8 | | | 0.163 | | | 428 | |
| Missing | | 0 | 0 | | 0 | _ | 0 | | _ | 0 | | 0 | _ |
| Other | | 15 | 8 | 8 | 6 | 7 | 6 | 6 | 6 | 6 | 7 | 6 | 7 |

| Table B6. | Well-wa | ater data fro | m the | e NR | CS c | of Misso | ouri. | | | | | | | | | |
|-----------|---------|---------------|-------|------|------|----------|-------|-----|-----|-----------|-----|-----|------|------|----|------|
| Well # | date | Na (mg/L) | Ca | Mg | CI | Cond | TDS | SAR | SO4 | Nitrate-N | рН | CO3 | HCO3 | Р | K | В |
| Miss #1 | ###### | 6 | 92 | 45 | 2 | 0.42 | 421 | 0.1 | 45 | 0.7 | 6.9 | 0 | 400 | 0.29 | 2 | 0.06 |
| Miss #2 | ###### | 10 | 81 | 27 | 2 | 0.41 | 417 | 0.2 | <3 | <.04 | 7 | 0 | 449 | 0.49 | 2 | 0.1 |
| Miss # 3 | ###### | 6 | 73 | 24 | 2 | 0.36 | 351 | 0.2 | 29 | 0.06 | 7.3 | 0 | 337 | 0.31 | 1 | 0.05 |
| NM #1 | Sep-97 | 14 | 57 | 15 | 2 | 0.3 | 268 | 0.4 | 62 | 0.23 | 6.9 | 0 | 190 | 0.39 | 3 | 0.04 |
| NM #2 | Sep-97 | 189 | 143 | 43 | 326 | 1.45 | 901 | 3.5 | 60 | 0.04 | 6.3 | 0 | 107 | 0.65 | 5 | 0.04 |
| NM #3 | Sep-97 | 6 | 40 | 6 | 2 | 0.22 | 178 | 0.2 | 8 | 0.04 | 6.9 | 0 | 151 | 0.27 | 1 | 0.03 |
| Miss #1 | Jul-98 | 5 | 110 | 30 | 26 | 0.76 | 613 | 0.1 | 12 | 0.1 | 6.6 | 0 | 549 | 0.2 | 8 | 0.04 |
| Miss #2 | Jul-98 | 8 | 44 | 13 | 12 | 0.51 | 339 | 0.3 | 49 | 19.6 | 6.7 | 0 | 166 | 0.13 | 40 | 0.02 |
| Miss #3 | Jul-98 | 3 | 42 | 13 | 12 | 0.34 | 255 | 0.1 | 24 | 17.4 | 6.5 | 0 | 176 | 0.21 | 5 | <.01 |
| NM #1 | Aug-98 | 9 | 16 | 11 | 7 | 0.13 | 89 | 0.4 | 5 | 1.43 | 5.5 | 0 | 43 | 0.45 | 2 | 0.01 |
| NM #2 | Aug-98 | 5 | 27 | 7 | 42 | 0.36 | 205 | 0.2 | 12 | 1.44 | 6 | 0 | 83 | 0.38 | 2 | 0.05 |
| NM #3 | Aug-98 | 5 | 7 | 3 | 10 | 0.33 | 170 | 0.4 | 11 | 27.4/<.04 | 5.9 | 0 | 56 | 3.01 | 7 | 0.21 |
| Miss # 1 | Aug-99 | 12 | 42 | 8 | 14 | 0.31 | 228 | 0.4 | 28 | 0.21 | 7.8 | 0 | 151 | 0.64 | 1 | <.01 |
| Miss #2 | Aug-99 | 7 | 38 | 11 | 2 | 0.28 | 208 | 0.3 | 21 | 2.06 | 7.6 | 0 | 151 | 0.91 | 3 | 0.01 |
| Miss #3 | Aug-99 | 10 | 45 | 9 | 18 | 0.33 | 235 | 0.4 | 39 | 2.16 | 7.9 | 0 | 132 | 1.71 | 1 | <.01 |
| NM #1 | Aug-99 | 11 | 25 | 9 | 10 | 0.24 | 165 | 0.5 | 23 | 2.45 | 6.9 | 0 | 95 | 0.38 | 1 | <.01 |
| NM #2 | Aug-99 | 12 | 11 | 3 | 4 | 0.13 | 93 | 0.8 | 20 | 0.25 | 6.4 | 0 | 51 | 0.24 | 1 | <.01 |
| NM #3 | Aug-99 | 11 | 48 | 12 | 8 | 0.39 | 214 | 0.4 | 30 | 5.8 | 6.6 | 0 | 61 | 1.15 | 1 | <.01 |

nd = nondetectable

^{*} High values were retested

| Table B6. | Well-wa | | | | | | | | | | | |
|-----------|---------|-----------|----------|-------------|-----------|-------------|----------|-----------|----------|---------------|-------------|----------|
| Well # | date | Cyanazine | Alachlor | Trifluralin | Bentazone | Acifluorfen | Atrazine | Metochlor | Molinate | Pendimethalin | Fluometuron | Aldicarb |
| Miss #1 | ###### | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #2 | ###### | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss # 3 | ###### | nd | nd | nd | nd | nd | nd | nd | | | | |
| NM #1 | Sep-97 | nd | nd | nd | nd | nd | nd | nd | | | | |
| NM #2 | Sep-97 | nd | nd | nd | nd | nd | nd | nd | | | | |
| NM #3 | Sep-97 | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #1 | Jul-98 | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #2 | Jul-98 | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #3 | Jul-98 | nd | nd | nd | nd | nd | nd | nd | | | | |
| NM #1 | Aug-98 | | | nd | nd | 10.6/nd | nd | nd | nd | nd | | |
| NM #2 | Aug-98 | | | nd | nd | nd | nd | nd | nd | nd | | |
| NM #3 | Aug-98 | | | nd | nd | nd | nd | nd | nd | 2.32/nd | 16.4/nd | nd |
| Miss # 1 | Aug-99 | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #2 | Aug-99 | nd | nd | nd | nd | nd | nd | nd | | | | |
| Miss #3 | Aug-99 | nd | nd | nd | nd | nd | nd | nd | | | | |
| NM #1 | Aug-99 | | | nd | nd | nd | nd | nd | nd | nd | | |
| NM #2 | Aug-99 | | | nd | nd | nd | nd | nd | nd | nd | | |
| NM #3 | Aug-99 | | | nd | nd | nd | nd | nd | nd | nd | nd | nd |

nd = nondetectable

^{*} High values were retested

APPENDIX C

Spreadsheet Analysis

| New Madrid Floodway - Ex | kpected Concen | trations, Runoff Co | pefficients, and Fu | nction Factors - Ni | trogen | | | | | | | | | | | | |
|---|---------------------|----------------------|---------------------|---------------------|--------------|---------------|----------|------------|-----------|--------------------|-------------|-----------------|--------|---------------|-------------------|--------------------------------|--------------------|
| Contour Range | Cupross/Tupolo 16 | Scrub/shrub marsh 19 | DI U 40 | Riparian 43 | River 45 | Onon water 24 | March 20 | Condhor 21 | Cotton 26 | Cotton/soybeans 37 | Coulonno 20 | Couhoons/som 20 | Com 40 | Horb Vog 41 | Posturo I C Total | | |
| Scenario 1 - Existing | Cypress/Tupelo To | Scrub/shrub marsh 19 | DLTI 42 | Ripariari 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Collon/soybeans 37 | Soybeans 36 | Soybeans/com 39 | Com 40 | nerb. veg. 41 | Pasture LC Total | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | | 42 | 0.1 | 0 | 0.9 | | 0 | 0.8 | | 18 | | 0.1 | 2.9 | 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 15.39261286 | | 1 | |
| Concentration/Export Coefficient | 33.3022433 | 1.5 | | | | 4.777017764 | | | | | | | | | | | |
| Wetland Function Factor | -0.8 | -0.8 | | | | | | | | 9.73 | 10 | 9.73 | 0.73 | 1.07 | 3.73 | | |
| Load | 65.80064134 | -0.6 | | | | | | | 10.04217 | , , | 286.0468424 | 1 | 1 2552 | 30.68143086 | 10.276 | Total Load | 835.404630 |
| | | | | | | | _ | | | | | | | | | TOTAL LOAG | 635.404630 |
| Wetland Function Value | -52.64051307 | (| | | | | | | 10.04217 | | 286.0468424 | | | 30.68143086 | | | |
| Net Yield WATERSHED FUNCTION | 13.16012827 | (| 82.49632646 | 0.196419825 | 0 | 6.187224484 | С | 0 | 9.256494 | 0 | 268.3690582 | 2 0 | 1.1571 | 27.8333434 | 17.606 | Final Load % Net Removal | 426.262135 48.9 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | | | | | 170.8 | 0.2 | 0 | | | 1500.4 | 2.4 | 3.7 | | | 8 | |
| 280 ft | 43.3 | 1.4 | 1 158.8 | 0.1 | | 9.8 | 0.1 | | | | 53.6 | 0.1 | 0.6 | 20.6 | 4.3 294. | 6 | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | 1062.856378 | 0.282900287 | 3.111903155 | 483.1936899 | 0.565801 | 0 | 14.71081 | 18.38851864 | 4244.635903 | 6.789606884 | 10.467 | 319.960224 | 4 28.007 | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.77800407 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 5 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | | | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | | 1.2 | | 1.2 | | 1.2 | 0 | 0 | 0 | 0 | 0 | (| 0 | | |
| Wetland Function Factor | -0.8 | | | | | | | | | 1 | 1 | 1 | 1 | · | 1 1 | 1 | |
| Load Season 1 * | 895.0977664 | 56.53249051 | | | | | | | 34.32183 | | 12407.91769 | | | | | | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | 876.0947099 | 0.551696921 | 0 | 54.06629822 | 0.551697 | 0 | 10.48224 | . 0 | 295.7095494 | 0.551696921 | 3.3102 | 113.6495656 | 3 23.723 | Total Load | 18669.9784 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| * Export Coefficients were | -907.1860264 | -51.40499792 | -2274.154041 | -0.860116725 | -1.15158777 | -284.43515 | -1.27888 | 0 | 44.80407 | 46.84811535 | 12703.62724 | 17.84946259 | 27.731 | 748.5812159 | 9 83.057 | | |
| reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 226.7965066 | 12.85124948 | 568.5385102 | 0.215029181 | 4.606351079 | 663.6820167 | 0.319719 | 0 | 41.03391 | 43.44569694 | 11888.67342 | 16.53801533 | 25.464 | 678.014179 | 75.502 | Final Load | 14245.6805 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 23.7 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 0.4 | 244.5 | 0.1 | - 11 | 121.9 | 0.1 | | 2.0 | 0.4 | 200.0 | 0.3 | 0.9 | 48.3 | 3 7.7 840. | 4 | |
| | | 3.1 | | | | | | | 2.6 | | | | | | | | |
| 280 ft | 43.3 231.6646835 | | | | | 9.8 | | | | | | | | | | 0 | |
| Volume Season 1 = 2190 | | 8.07829605 | | | | | | | 6.775345 | 0.260590195 | 836.2339362 | 0.781770585 | | 125.8650643 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.77800407 | 7 16.026 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.875 | 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0 | 0 | 0 | 0 | 0 | | ol ol | | |
| Wetland Function Factor | -0.8 | -0.8 | | -0.8 | -0.2 | -0.3 | -0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 428.6480055 | 14.94723079 | 1178.902557 | 0.482168735 | 5.303856086 | 587.7636881 | 0.482169 | | 16.08763 | 0.679459985 | 2521.291196 | 2 038379955 | 5 5688 | 251.2128209 | 9 42.97 | | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | | | | 54.06629822 | | | 10.48224 | | 295.7095494 | | | 113.6495656 | | Total Load | 6681.67693 |
| Wetland Function Value (Both | 230.0047000 | 1.123130000 | 070.0947098 | 0.331090921 | 0 | 34.00023022 | 0.551097 | 0 | 10.40224 | | 293.7093494 | 0.551090921 | 3.3102 | 113.0493030 | 23.723 | TOTAL LUAU | 0001.07093 |
| Seasons) | -534.0262177 | -18.13679014 | -1643.997814 | -0.827092525 | -1.060771217 | -192.5489959 | 0.00700 | | 26.56987 | 0.070450005 | 2817.000745 | 2.590076876 | 8.879 | 364.8623866 | 66.693 | | |
| | | | | | | | | | | | | | | | | Final Load | 1001 00000 |
| Net Yield | 133.5065544 | 4.534197535 | 410.9994534 | 0.206773131 | 4.243084869 | 449.2809904 | 0.206773 | 0 | 24.26801 | 0.631243112 | 2632.701843 | 2.390256563 | 8.114 | 330.208680 | 1 60.608 | % Net | 4061.89968 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 39.2 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | 7221.2 | 0.5 | 4.4 | 687 | 87.1 | 0.2 | 288.6 | 643.7 | 52577.2 | 77.9 | 8211.8 | 3881.1 | 1 340.7 75077. | 7 | |
| Volume = 515089 | 4747.635956 | | | | | | | | | | 360718.7936 | | | 26627.23975 | | | |
| Concentration | 1,2 | 1.2 | | | | 1.2 | | | 6.75 | | | | 6.75 | 1.875 | 3.75 | | |
| Wetland Function Factor | -0.8 | 3.0- | | | | -0.3 | | | | 1 | | | | | 1 1 | 1 | |
| Load | 7027.621657 | 3700.672445 | | | | 6976.844044 | | | | 9077.037466 | 853118.8368 | | 105828 | 42359.62605 | | Total Load | 1111154.33 |
| Wetland Function Value | -5622.097325 | -2960.537956 | | | | -2093.053213 | | | | | 853118.8368 | | | 42359.62605 | | . Jun Lodd | |
| Net Yield | 1405.524331 | 740.1344889 | | | | | | 1.6248836 | | | 799723.9424 | | | 38418.16617 | | Final Load | 974041.779 |
| WATERSHED FUNCTION | 1403.024031 | 740.1344003 | 14007.012 | 1.010002200 | 33.74743304 | 4000.7 3000 | 170.3032 | 1.0240030 | 3420.171 | 0423.320473 | 133123.3424 | 1019.303433 | 37400 | 30410.10011 | 3031 | % Net Removal | 12.3 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | 12.3 |
| Flow (existing conditions) | | | | | | | | | | | 1 | | | | | | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 836.7 | 7 101.8 17293. | 3 | |
| | | | | | | | | | | | | | | | | 9 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | | | | | | | 216.9195 | | 29998.55224 | | | 2191.987273 | | | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | | | | 15 | 9.75 | 6.75 | 1.875 | 3.75 | 1 | |
| Wetland Function Factor | -0.8 | | | | | | | -0.2 | 1 | | 1 | 1 | 1 | ļ . | 1 1 | | |
| Load | 1923.837777 | 311.3972455 | | | | | | | 547.2789 | | 113916.4113 | | | 3879.55689 | | Total Load | 138147.576 |
| Wetland Function Value | -1539.070222 | -249.1177964 | | | | -688.9518635 | | | 547.2789 | | 113916.4113 | | | 3879.55689 | | | |
| Net Yield | 384.7675554 | 62.2794491 | | | | | | | 515.1697 | | 109475.9176 | | | 3555.091044 | | Final Load | 120880.034 |
| | | | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | |

Table C1. Expected Watershed Functions for Nitrogen - New Madrid Floodway.

| New Madrid Floodway - Hi | gh Retention Sc | enario - Nitrogen | | | | | | | | | | | | | | | |
|--|-------------------|-----------------------------|--------------|--------------|--------------|---------------|-------------|-------------|-----------|--------------------|--------------|-----------------|----------|---------------|------------------|---------------------|-------------|
| Contour Range | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BI H 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Sovheans 38 | Sovbeans/com 39 | Com 40 | Herb Veg 41 | Pasture I C Tota | | |
| Scenario 1 - Existing | Cypress/Tupelo To | OCIUD/SIII UD III ai SII 13 | DEIT 42 | Tupanan 40 | ICIVEI 43 | Open water 24 | IVIGISII 23 | Caridbar 51 | Cotton so | Cotton/soybeans 57 | Soybeans 30 | ooybeans/com 55 | COIII 40 | Tielb. Veg. 4 | I asture LC rota | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | 0 | 42 | 0.1 | 0 | 0.9 | 0 | 0 | 0.8 | C | 18 | 0 | 0.1 | 1 2. | 9 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | 0 | 222.9274966 | 0.530779754 | . 0 | 4.777017784 | 0 | 0 | 4.246238 | C | 95.54035568 | 0 | 0.5308 | | | | |
| Concentration/Export Coefficient | 1.5 | 1.5 | 1.5 | 1.5 | | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | -0.9 | 0.2 | | | | 0.2 | 2 0. | 2 0.2 | | |
| Load | 65.80064134 | 0 | 412.4816323 | 0.982099124 | 0 | 8.83889212 | 0 | 0 | 10.04217 | C | 286.0468424 | 0 | 1.2553 | 30.6814308 | 6 19.276 | Total Load | 835.404630 |
| Wetland Function Value | -59.22057721 | 0 | | -0.883889212 | . 0 | -7.955002908 | 0 | 0 | 2.008435 | C | 57.20936848 | 0 | 0.2511 | 6.13628617 | 2 3.8551 | | |
| Net Yield | 6.580064134 | 0 | 41.24816323 | 0.098209912 | . 0 | 0.883889212 | 0 | 0 | 1.851299 | C | 53.67381163 | 0 | 0.2314 | 5.5666686 | 8 3.5212 | Final Load | 113.654733 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 86.4 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | . 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 9.9 2370. | 8 | |
| 280 ft | 43.3 | 1.4 | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | 0.262900267 | 3.111903133 | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | 319.900224 | | | |
| Concentration/Export Coefficient | 101.3020921 | 3.217922007 | 391.0013071 | 0.372706730 | | 30.32343023 | 0.372708 | 0 | 7.001400 | | 199.77 10941 | 0.372700730 | 2.230 | 70.7700040 | 7 10.020 | | |
| Season 1 Concentration/Export Coefficient | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Season 2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0 | | | | | | 0 0 | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | | | 0.2 | 0.2 | 0.2 | 0.2 | 2 0. | 2 0.2 | | |
| Load Season 1 * | 895.0977664 | 56.53249051 | | 0.523448986 | | | | | 34.32183 | 46 84811535 | 12407.91769 | 17.29776567 | | | | 1 | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | | | | 54.06629822 | | | 10.48224 | | 295.7095494 | | | 113.649565 | | Total Load | 18669.9784 |
| Wetland Function Value (Both | 230.004/000 | 1.123130000 | 070.0347099 | 0.001090921 | U | J4.00023022 | 0.00109/ | - 0 | 10.40224 | | 233.7033494 | 0.551050921 | 3.3102 | 113.048300 | U 23.123 | TOTAL LUMO | 10009.9764 |
| Seasons) | -1020.58428 | -57.83062266 | -2558.423296 | -0.967631316 | -5.182144963 | -853.30545 | -1 /2074 | | 8.960815 | 0 200022274 | 2540.725448 | 3 560003540 | 5 5 4 6 | 149.716243 | 2 16 611 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | -1020.30420 | -57.55002200 | 2550.425250 | -0.307631310 | -5.102144365 | -033.30343 | -1.40074 | | 0.300013 | 3.303023071 | 2540.725440 | 3.309092310 | 3.340. | 143.710243 | 2 10.011 | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 113.3982533 | 6.42562474 | 284.2692551 | 0.107514591 | 0.575793885 | 94.81171667 | 0.159859 | 0 | 8.206783 | 8.689139389 | 2377.734685 | 3.307603066 | 5.0927 | 135.602835 | 8 15.1 | Final Load | 3053.482249 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 83.64 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | 0.1 | | 121.9 | | | 2.6 | | | | | | | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | C | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | | 1.2 | 1.2 | 1.2 | | | | C | 0 | 0 |) (|) | 0 0 | | |
| Wetland Function Factor | -0.9 | | | | | | | | | | | | | | | | |
| Load Season 1 * | 428.6480055 | 14.94723079 | | 0.482168735 | | 587.7636881 | | | 16.08763 | | 2521.291196 | | | 251.212820 | | | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | 876.0947099 | 0.551696921 | 0 | 54.06629822 | 0.551697 | 0 | 10.48224 | 0 | 295.7095494 | 0.551696921 | 3.3102 | 113.649565 | 6 23.723 | Total Load | 6681.67693 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -600.7794949 | -20.40388891 | | -0.93047909 | | | | | 5.313974 | | 563.4001491 | 0.518015375 | | 72.9724773 | | | |
| Net Yield | 66.75327721 | 2.267098768 | 205.4997267 | 0.103386566 | 0.530385609 | 64.18299863 | 0.103387 | 0 | 4.853602 | 0.126248622 | 526.5403687 | 0.478051313 | 1.6228 | 66.0417360 | 2 12.122 | Final Load % Net | 951.224631 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 85.70 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | | | | 687 | | | | | | | | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | 30.18728064 | 4713.332228 | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | | | 9.75 | | | | | | 1 | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | | | | | | | | | | |
| Load | 7027.621657 | 3700.672445 | | | | | | | | | 853118.8368 | | | 42359.6260 | | Total Load | 1111154.33 |
| Wetland Function Value | -6324.859491 | -3330.6052 | | | | -6279.159639 | | -1.8279941 | | | 170623.7674 | | | 8471.92521 | | | |
| Net Yield | 702.7621657 | 370.0672445 | 7333.505998 | 0.507776131 | 4.468429955 | 697.6844044 | 88.4546 | 0.2031105 | 685.2343 | 1684.665295 | 159944.7885 | 203.8766918 | 19498 | 7683.63323 | 4 726.21 | Final Load % Net | 199623.657 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 82.0 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | 1 | 1 1 | | |
| Flow (existing conditions) | 40 | | | | | | | | | | | | | | 7 404 6 176 | | |
| 290 and below | 496.1 | 80.3 | | 0.5 | | 592.2 | | | | | | | | | | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | | | | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | 1 | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | | | | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | | | | | | | | | | |
| Load | 1923.837777 | 311.3972455 | | 1.938961678 | | | | | 547.2789 | | | | | | | Total Load | 138147.576 |
| Wetland Function Value | -1731.453999 | -280.257521 | | -1.74506551 | -7.678288246 | | | | 109.4558 | | 22783.28227 | | | 775.911378 | | | |
| Net Yield | 192.3837777 | 31.13972455 | 1297.165363 | 0.193896168 | 0.853143138 | 229.6506212 | 0.620468 | 0 | 103.0339 | 334.3205827 | 21895.18353 | 8.923147225 | 90.092 | 711.018208 | 8 101.96 | Final Load | 24996.5367 |
| | | | | | | | | | | | | | | | | % Net | |
| NATERSHED FUNCTION | | | | | | | | | | | | | | | | | 81.9 |

Table C2. High Watershed Functions for Nitrogen - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario A - Nitroger | 1 | | | | | | | | | | | | | | |
|--|----------------------------|-----------------------------|--------------|--------------|--------------|---------------|----------|------------|----------------------|--------------------|-------------|-----------------|--------|---------------|---------------|---------------------|-------------|
| • | | Ĭ. | | | | | | | | | | | | | | | |
| Contour Range Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC To | al | |
| | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | 42 | 0.1 | 1 0 | 0.9 | | | | | 18 | 0 | | 2.9 | 9 1.7 7 | | |
| 275 ft | 6.7 | 0 | | | | | | | | C | | | | | | 5.1 | |
| Volume = 388 | 35.5622435 | 0 | | | | | | | 4.246238 | | 95.54035568 | | 0.5308 | | | | |
| Concentration/Export Coefficient | 1.5 | 1.5 | | 1.5 | | | | | | 9.75 | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | -0.1 | | -0.1 | | | | 1 | | 1 | | | 1 1 | | |
| Load | 65.80064134 | 0 | | | | | | | 10.04217 | | 286.0468424 | | | 30.68143086 | | Total Load | 835.404630 |
| Wetland Function Value | -6.580064134 | 0 | | | | | | | 10.04217 | | 286.0468424 | | | 30.68143086 | | | |
| Net Yield | 59.22057721 | 0 | 371.2334691 | 0.883889212 | 2 0 | 7.955002908 | 3 0 | 0 | 9.256494 | C | 268.3690582 | 0 | 1.1571 | 27.8333434 | 4 17.606 | Final Load | 763.5149745 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 8.61 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 3 0.2 | . 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 113.1 | 1 9.9 237 | 1.8 | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.9602244 | | +.0 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | | | | 7.081466 | | 199.7718941 | | | 76.77800407 | | | |
| | 101.3020921 | 3.217322007 | 391.8013071 | 0.372706730 | , 0 | 30.32343023 | 0.372708 | 0 | 7.001400 | | 199.7710941 | 0.372700730 | 2.2303 | 70.7700040 | 10.020 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.875 | 5 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 0 | |) n | 0 | 0 | | 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 1 | | |
| Load Season 1 * | 895.0977664 | 56.53249051 | | | | | | | 34.32183 | 46.84811535 | 12407.91769 | 17.29776567 | 24.421 | 634.9316503 | | | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | | 0.551696921 | | 54.06629822 | | | 10.48224 | | 295.7095494 | | | 113.6495656 | | Total Load | 18669.97843 |
| Wetland Function Value (Both | 200.0011000 | 7.720700000 | 010.0041000 | 0.001000021 | | O 1.000EGOEE | 0.001001 | | 10.10221 | | 200.7000101 | 0.001000021 | 0.0102 | 110.010000 | 20.720 | TOTAL EDUC | 10000.07010 |
| Seasons) | -113.3982533 | -6.42562474 | -284.2692551 | -0.107514591 | -0.575793885 | -94.81171667 | -0.15986 | | 44.80407 | 46 84811535 | 12703.62724 | 17 84946250 | 27 731 | 748.5812159 | 9 83 057 | | |
| * Export Coefficients were | -110.0002000 | -0.42302474 | -204.2032331 | -0.107314331 | -0.575735005 | -34.01171007 | -0.10000 | | 44.00407 | 40.04011330 | 12/05.02/24 | 17.04340233 | 21.131 | 740.301213 | 00.007 | | |
| reduced by 50% for upland and | | | | | | | | | | | | | | | | | |
| ag land covers | | | | | | | | | | | | | | | | | |
| ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| land covers | 1020.58428 | 57.83062266 | 0550 400000 | 0.00700404 | E 400444000 | 853.30545 | 4 400705 | | 41.03391 | 40.4450000 | 11888.67342 | 40 50004500 | 05.404 | 678.014179 | 25 500 | F | 17266.40332 |
| Net Yield | 1020.58428 | 57.83062266 | 2558.423296 | 0.967631316 | 5.182144963 | 853.30545 | 1.438735 | 0 | 41.03391 | 43.44569694 | 11888.67342 | 16.53801533 | 25.464 | 6/8.0141/9 | 9 /5.502 | Final Load % Net | 17266.40332 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 7.52 |
| | | | | | | | | | | | | | | | | | |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48.3 | 3 7.7 84 | 0.4 | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | 53.6 | | | | | | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | 317.6594479 | | | 6.775345 | | 836.2339362 | | | 125.8650643 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5,217922607 | | 0.372708758 | | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | 76.77800407 | | | |
| Concentration/Export Coefficient | 101.0020021 | O.E.ITOEEGOT | 001.0010011 | 0.072700700 | , | 00.02010020 | 0.012100 | - | 7.001100 | | 100.1110011 | 0.072700700 | 2.2000 | 70.77000101 | 10.020 | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.875 | 5 3.75 | | |
| Concentration/Export Coefficient | 1.5 | 1.0 | 1.0 | 1.0 | 1.5 | 1.0 | 1.0 | 1.5 | 0.73 | 3.10 | 13 | 3.73 | 0.73 | 1.07 | 3.73 | | |
| Season 2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 12 | 1.2 | 1.2 | | | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| | | 14.94723079 | | | | | | | | | 2521.291196 | | | | | | |
| Load Season 1 * | 428.6480055 238.8847666 | 7.723756888 | 876.0947099 | | | | | | 16.08763 10.48224 | | 295.7095494 | | | 251.2128209 | | | 6681.676934 |
| Load Season 2 ** | 230.004/000 | 1.123130000 | 876.0947099 | 0.551696921 | 0 | 54.00029022 | 0.551697 | U | 10.46224 | | 295.7095494 | 0.551696921 | 3.3102 | 113.0493030 | 0 23.723 | | 0001.070934 |
| Wetland Function Value (Both | 00 75007704 | 0.007000700 | 205 4007007 | 0.400000500 | 0.500005000 | C4 40000000 | 0.40000 | | 00 50007 | 0.070450005 | 2047 200745 | 0.500070070 | 0.070 | 204 0002000 | 00.000 | | |
| Seasons) | -66.75327721 | -2.267098768 20.40388891 | | -0.103386566 | | | | | 26.56987 | | 2817.000745 | | | 364.8623866 | | Final Load | 6113.884199 |
| Net Yield | 600.7794949 | 20.40300091 | 1849.497541 | 0.93047909 | 4.773470478 | 577.6469877 | 0.930478 | , , | 24.26801 | 0.031243112 | 2632.701843 | 2.390256563 | 0.114 | 330.208680 | 1 60.606 | % Net | 0113.004198 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 8.50 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | |
| (existing conditions) | | | | | | | | ļ | | | | | | | | | |
| 300 and below | 692 | 364.4 | | | | 687 | | | | 643.7 | | | | | | 7.7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 | 1.3721491 | 1980.011 | 4416.261943 | 360718.7936 | 534.4520823 | 56339 | 26627.23975 | | | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | | | 9.75 | 15 | 9.75 | 6.75 | 1.875 | 5 3.75 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 7027.621657 | 3700.672445 | | | | 6976.844044 | | | | | 853118.8368 | | | 42359.62605 | | | 1111154.334 |
| Wetland Function Value | -702.7621657 | -370.0672445 | | -0.507776131 | | -697.6844044 | -88.4546 | -0.2031105 | 3719.26 | | 853118.8368 | | 105828 | 42359.62605 | 5 3977 | | |
| Net Yield | 6324.859491 | 3330.6052 | 66001.55398 | 4.569985181 | 40.2158696 | 6279.159639 | 796.0914 | 1.8279941 | 3426.171 | 8423.326475 | 799723.9424 | 1019.383459 | 97488 | 38418.16617 | 7 3631 | Final Load | 1034908.904 |
| | | | | | | | | | | | | | | | | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 6.86 |
| | | | | | 1 | | | | | | 1 | - | - | | | | |
| Scenario 5 - 2 year flood | | | | | 1 | _ | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | | 0.5 | | 592.2 | | | 82.8 | 224.8 | | | 72.4 | | | 3.3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | | 1.309900366 | 5.763561611 | | | | 216.9195 | 588.9312046 | 29998.55224 | | | 2191.987273 | | | |
| Concentration | 1.2 | 1.2 | | 1.2 | | 1.2 | | | | 9.75 | 15 | 9.75 | 6.75 | 1.875 | 5 3.75 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 1923.837777 | 311.3972455 | | | | | | | 547.2789 | 1758.778631 | 113916.4113 | | | 3879.55689 | | | 138147.5767 |
| Wetland Function Value | -192.3837777 | -31.13972455 | -1297.165363 | -0.193896168 | | | | 0 | 547.2789 | 1758.778631 | 113916.4113 | | | 3879.55689 | | | |
| Net Yield | 1731.453999 | 280.257521 | 11674.48826 | 1.74506551 | 7.678288246 | 2066.855591 | 5.58421 | 0 | 515.1697 | 1671.602913 | 109475.9176 | 44.61573612 | 450.46 | 3555.091044 | 4 509.79 | Final Load | 131990.7119 |
| | | | | | 1 | | 1 | | | | | | | | | % Net | |
| WATERSHED FUNCTION | | | 1 | I . | 1 | | 1 | 1 | 1 | I . | 1 | 1 | 1 | 1 | 1 1 | Removal | 4.46 |

Table C3. Low Watershed Functions for Nitrogen - New Madrid Floodway.

| New Madrid Floodway - Lov | | | | | | | | | | | | | | 1 | | | |
|--|-----------------------------|----------------------------|--------------|----------------------------|--------------|-----------------------------|----------|------------|-----------|-----------------------|--------------|-----------------|--------|---------------|------------------|---------------------|--------------|
| Contour Range C | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | 1 | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | 0 | | | | 0.9 | | | 0.8 | 0 | 18 | | | | | | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | | |
| Concentration/Export Coefficient | 1.5 | 1.5 | | | | 1.5 | | | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 3.75 | | |
| Wetland Function Factor | -0.1 65.80064134 | -0.1 | -0.1 | -0.1 | | -0.1 | -0.1 | | 10.04047 | 1 | 1 000 040040 | 1 | 4.055 | 00.0044000 | 1 1 | T | 005 101000 |
| Load | | 0 | | | | 8.83889212 | | | 10.04217 | | 286.0468424 | | | 30.6814308 | | Total Load | 835.404630 |
| Wetland Function Value | -6.580064134 | 0 | | | | | | | 10.04217 | | 286.0468424 | | | 30.6814308 | | | 700 54 407 4 |
| Net Yield | 59.22057721 | 0 | 371.2334691 | 0.883889212 | . 0 | 7.955002908 | 0 | 0 | 9.256494 | 0 | 268.3690582 | | 1.157 | 27.833343 | 1 17.bUb | Final Load % Net | 763.514974 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 8.6 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 9.9 2370.8 | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | 0.0 | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | 36.52545825 | | | 7.081466 | | 199.7718941 | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | 1.2 | 1.2 | | 1.2 | | 1.2 | 0 | 0 | C | 0 | (|) (| 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | 1 | 1 | 1 1 | · · | 1 1 | | |
| Load Season 1 * | 895.0977664 | 56.53249051 | | 0.523448986 | | | | | 41.42432 | | 16962.00679 | | | 677.842497 | | | |
| Load Season 2 ** | 238.8847666 | 7.723756888 | 876.0947099 | 0.551696921 | 0 | 54.06629822 | 0.551697 | 0 | 10.48224 | 0 | 295.7095494 | 0.551696921 | 3.3102 | 113.649565 | 5 23.723 | Total Load | 23304.2057 |
| Wetland Function Value (Both | 440 0000500 | 0.40500.474 | 004 0000554 | 0.407544504 | 0.575700005 | 0101171007 | 0.45000 | | E4 000E0 | E0 0700 400 | 47057 7400 | 00 50445050 | 00.70 | 704 400000 | | | |
| Seasons) | -113.3982533 | -6.42562474 | -284.2692551 | -0.107514591 | -0.575793885 | -94.81171667 | -0.15986 | 0 | 51.90656 | 59.6720466 | 17257.71634 | 22.58445259 | 32.785 | 791.492062 | 3 90.569 | | |
| * Export Coefficients were NOT reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 1020.58428 | 57.83062266 | 2558.423296 | 0.967631316 | 5.182144963 | 853.30545 | 1 438735 | 0 | 48.1364 | 56 26962819 | 16442.76252 | 21 27300533 | 30.517 | 720.925025 | 83.014 | Final Load | 21900.630 |
| WATERSHED FUNCTION | 1020.00120 | 07.00002200 | 2000.120200 | 0.007001010 | 0.102111000 | 555.55515 | 1.400700 | | 40.1001 | 00.20002010 | 10442.70202 | 21.27000000 | 00.011 | 720.020020 | 00.014 | % Net Removal | 6.0 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | | | 121.9 | | | | 0.1 | | | | | | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | 0 | | | | | | 5 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | 1.2 | | 1.2 | | 1.2 | | 1.2 | 0 | | | 0 | |) (| 0 0 | | |
| Wetland Function Factor | -0.1 428.6480055 | -0.1 14.94723079 | | -0.1 0.482168735 | | -0.1 587.7636881 | -0.1 | -0.1 | 19.63887 | 1 0 0 7 0 7 5 4 0 0 5 | 3495.302921 | 0.000050705 | 0.700 | 000 500440 | 1 1 | | |
| Load Season 1 ** | 238.8847666 | 7.723756888 | | 0.482168735 | | 54.06629822 | | | 19.63887 | | 295.7095494 | | | 269.538142 | | | 7685,4265 |
| Wetland Function Value (Both | 230.004/000 | 1.123130000 | 0/0.094/099 | 0.551696921 | U | 54.00029022 | 0.551697 | 0 | 10.46224 | U | 295.7095494 | 0.551696921 | 3.3102 | 2 113.049505 | 23.723 | | 7000.4200. |
| Seasons) | -66.75327721 | -2.267098768 | -205,4997267 | -0.103386566 | -0.530385600 | -64.18299863 | -0 10330 | | 30.12111 | 0.876751235 | 3791.01247 | 3 181050626 | 10 109 | 383.187708 | 72 536 | | |
| Net Yield | 600.7794949 | 20.40388891 | 1849.497541 | | | 577.6469877 | | | 27.81925 | | 3606.713568 | | | 348.53400 | | Final Load | 7117.63378 |
| Net Held | 000.1134343 | 20.40300007 | 1043.437.541 | 0.33047303 | 4.775470470 | 377.0403077 | 0.000473 | - | 27.01323 | 0.020004002 | 3000.7 13300 | 2.302130313 | 3.5450 | 340.33400. | 00.451 | % Net | 7117.03570 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 7.3 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | |
| (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | | | | 687 | | | | 643.7 | | | 8211.8 | | | | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 1.2 | 1.2 | | 1.2 | | 1.2 | | | | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 3.75 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | 1 | 1 | 1 1 | | 1 1 | | |
| Load | 7027.621657 | 3700.672445 | | | | | | | | | 853118.8368 | | | 42359.6260 | | | 1111154.33 |
| Wetland Function Value | -702.7621657 | -370.0672445 | | | | -697.6844044 | | | | | 853118.8368 | | | 42359.6260 | | | 400: |
| Net Yield | 6324.859491 | 3330.6052 | 66001.55398 | 4.569985181 | 40.2158696 | 6279.159639 | 796.0914 | 1.8279941 | 3426.171 | 8423.326475 | 799723.9424 | 1019.383459 | 97488 | 38418.1661 | 7 3631 | Final Load | 1034908.90 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 6.8 |
| Scenario 5 - 2 year flood | | | | | | | | | | | 1 | | - | 1 | | - | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 1 836. | 7 101.8 17293.3 | + | |
| Volume = 45305 | 1299.683143 | 210.3699988 | | | | 1551.445994 | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | 1 | |
| Concentration | 1.2 | 210.3099990 | 1.2 | 1.309900300 | | 1.2 | | 1.2 | | 9.75 | | | | | | + + | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 9./5 | 10 | 9.75 | 0.75 | 1.07 | 1 1 | 1 | |
| | 1923.837777 | 311.3972455 | | | | | | | 547.2789 | 1758 779631 | 113916.4113 | 46 94249014 | 478 5/ | 3879.55689 | 1 549.27 | 1 | 138147.576 |
| | 1923.03//// | | | | | | | | | | 113916.4113 | | | | | _ | 130141.370 |
| Load Wetland Function Value | -102 3837777 | -31 13Q794EE | | | | | | | | | | | | | | | |
| Wetland Function Value | -192.3837777 1731.453999 | -31.13972455 280.257521 | | | | | | | 547.2789 | | | | | 3879.55689 | | Final Load | 131000 744 |
| | -192.3837777 1731.453999 | -31.13972455 280.257521 | | -0.193896168 1.74506551 | | -229.6506212 2066.855591 | | | 515.1697 | | 109475.9176 | | | 3879.55689 | | Final Load % Net | 131990.711 |

Table C4. Low (no runoff reduction) Watershed Functions for Nitrogen - New Madrid Floodway.

| New Madrid Floodway - Ex | pected Concent | trations (2X for Se | ason 2), Runoff Co | efficients, and Fur | nction Factors - Niti | ogen | | | | | | | | | | | |
|---|-------------------|----------------------|--------------------|---------------------|-----------------------|---------------|----------|------------|-----------|--------------------|-------------|-----------------|--------|---------------|------------------|------------------|-------------|
| | | | | | | | | | _ | | | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | 4.0 | | | | | | |
| 275 ft | 6.7 | 0 | | | | | | | | C | | | | | | 1 | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | | |
| Concentration/Export Coefficient | 1.5 | 1.5 | | | | | | | | 9.75 | | | | | | | |
| Wetland Function Factor | -0.8 | -0.8 | | | | | | | | 1 | 1 | | 1 | | 1 1 | | |
| Load | 65.80064134 | (| | | | | | | 10.04217 | | 286.0468424 | | | | | Total Load | 835.404630 |
| Wetland Function Value | -52.64051307 | (| | | | | | | 10.04217 | | 286.0468424 | | 1.2553 | | | | |
| Net Yield | 13.16012827 | (| 82.49632646 | 0.196419825 | 0 | 6.187224484 | 0 | 0 | 9.256494 | 0 | 268.3690582 | 0 | 1.1571 | 27.833343 | 4 17.606 | Final Load | 426.262135 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 48.9 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 113. | 1 9.9 2370. | | |
| 280 ft | 43.3 | 10.6 | | 0.1 | | 9.8 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 9 | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | C | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Concentration/Export Coefficient | - | | | | | _ | | _ | | | | | | | | | |
| Season 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | | 0 | 0 | 0 | - ' | 0 | 1 | |
| Wetland Function Factor | -0.8 | -0.8 | | | | -0.3 | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 895.0977664 | 56.53249051 | | 0.523448986 | | | | | 34.32183 | | 12407.91769 | | | 634.931650 | | | |
| Load Season 2 ** | 597.2119165 | 19.30939222 | 2190.236775 | 1.379242301 | 0 | 135.1657455 | 1.379242 | 0 | 26.2056 | 0 | 739.2738736 | 1.379242301 | 8.2755 | 284.123914 | 1 59.307 | Total Load | 21107.92712 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | 1 | |
| Seasons) | -1193.847746 | -60.67350618 | -3325.467693 | -1.52215303 | -1.15158777 | -308.7649842 | -1.94091 | 0 | 60.52744 | 46.84811535 | 13147.19156 | 18.67700797 | 32.697 | 919.055564 | 4 118.64 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 298.4619366 | 15.16837655 | 831.3669232 | 0.380538258 | 4.606351079 | 720.4516298 | 0.485228 | 0 | 55.18494 | 43.44569694 | 12287.88132 | 17.28280617 | 29.932 | 831.441092 | 6 107.53 | Final Load | 15243.61751 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 27.78 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | | | 121.9 | | | 2.6 | | | | | | | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 8 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | C | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 5 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | | 0 | 0 | 0 | | 0 0 | | |
| Wetland Function Factor | -0.8 | -0.8 | -0.8 | -0.8 | -0.2 | -0.3 | -0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 428.6480055 | | | | | | | | 16.08763 | 0.679459985 | 2521.291196 | | 5 5688 | 251.2128209 | | | |
| Load Season 2 ** | 597.2119165 | 19.30939222 | | | | 135.1657455 | | | 26.2056 | | 739.2738736 | | | 284.123914 | | Total Load | 9119.625626 |
| Wetland Function Value (Both | 337.2113103 | 19.500552222 | 2130.230773 | 1.373242301 | - | 155.1057455 | 1.573242 | | 20.2000 | | 755.2750750 | 1.373242301 | 0.2700 | 204.123314 | 1 33.307 | Total Load | 3113.023020 |
| Seasons) | -820.6879376 | -27.40529841 | -2695,311466 | -1.489128829 | -1.060771217 | -216.8788301 | -1.48913 | | 42.29323 | 0.070450005 | 3260.56507 | 3.417622257 | 13.844 | 535.33673 | 5 102.28 | | |
| | | | | | | | | | | | | | | | | Final Load | 5059.83666 |
| Net Yield | 205.1719844 | 6.851324602 | 673.8278664 | 0.372282207 | 4.243084869 | 506.0506036 | 0.372282 | 0 | 38.41903 | 0.631243112 | 3031.909735 | 3.135047406 | 12.583 | 483.635593 | 7 92.634 | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 44.52 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | 1 | | 1 | | | |
| (existing conditions) | | | 1 | | | | | 1 | | | 1 | | | | | | |
| 300 and below | 692 | | | | | 687 | | | | | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 1.2 | | | | | 1.2 | | | | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Wetland Function Factor | -0.8 | -0.8 | -0.8 | -0.8 | -0.2 | -0.3 | -0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 7027.621657 | | | 5.077761313 | | | | | | | 853118.8368 | | 105828 | 42359.6260 | 5 3977 | Total Load | 1111154.33 |
| Wetland Function Value | -5622.097325 | -2960.537956 | | | | -2093.053213 | | | | | 853118.8368 | | | 42359.6260 | | | |
| Net Yield | 1405.524331 | 740.1344889 | | 1.015552263 | | 4883.79083 | | | | | 799723.9424 | | 97488 | 38418.1661 | 7 3631 | Final Load | 974041.779 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 12.3 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | 12.0 |
| Flow (existing conditions) | | | | 1 | | | | | | 1 | | 1 | | 1 | | 1 | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | 0 | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 836. | 7 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | | | | | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | 1 | |
| | | | | | | | | | | | | | | | | 1 | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | | | | | | 6.75 | 1.87 | | + + | |
| Wetland Function Factor | -0.8 | -0.8 | | | | | | | | 1 | | | 1 | | 1 1 | | |
| Load | 1923.837777 | 311.3972455 | | | | | | | 547.2789 | | 113916.4113 | | | | | Total Load | 138147.576 |
| Wetland Function Value | -1539.070222 | -249.1177964 | | | | | | | 547.2789 | | 113916.4113 | | | 3879.55689 | | I | |
| Net Yield | 384,7675554 | 62.2794491 | 2594.330725 | 0.387792336 | 6.825145107 | 1607.554348 | 1.240935 | 0 | 515.1697 | 1671.602913 | 109475.9176 | 44.61573612 | 450.46 | 3555.09104 | 4 509.79 | Final Load | 120880.034 |
| Net field | | | | | | | | | | | | | | | | | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net | |

Table C5. Expected (concentration doubled) Watershed Functions for Nitrogen - New Madrid Floodway.

| non maana noodinay Ex | | | | nction Factors - Pl | nosphorus | | | | | | | | | | | | |
|---|-----------------------------|----------------------|--------------|-----------------------------|--------------|--------------------|----------|------------|-----------------|--------------------|-------------|-----------------|--------|---------------|------------------|---------------------|-------------|
| | | | | | | | | | | | | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | 40 | | | | | | | | | | | | | | |
| 275 ft Volume = 388 | 6.7 35.5622435 | | | | | 0.9 4.777017784 | | | 0.8 4.246238 | S C | 95.54035568 | | | 1 2. | | 1 | |
| Concentration/Export Coefficient | 35.5622435 | | | | | 0.21 | | | | | | | | | | | |
| Wetland Function Factor | -0.4 | | | | | -0.21 | | | | | | | | | 1 1 1 | | |
| Load | 9.212089788 | | | 0.137493877 | | | | | 1.456087 | | 32.76195794 | | | 4.10468544 | | Total Load | 109.2041139 |
| | | 0 | | | | | | | | | | | | | | TOTAL LOAG | 109.2041138 |
| Wetland Function Value | -3.684835915 5.527253873 | | | -0.068746939 0.068746939 | | | | | 1.456087 | | 32.76195794 | | | 4.10468544 | | Final Load | 78.87296452 |
| Net Yield | 5.527253873 | 0 | 34.64845/11 | 0.068746939 | 0 | 0.989955917 | 0 | 0 | 1.346092 | : | 30.28706814 | 0 | 0.1683 | 3.70595320 | 1 2.1312 | % Net | 78.87296452 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 27.77 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 9.9 2370. | 0 | |
| 280 ft | 43.3 | | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | ы | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.202900207 | | 36.52545825 | | | 7.081466 | | 199.7718941 | | | 319.900224 | | | |
| Concentration/Export Coefficient | 101.3020921 | 3.217922007 | 391.0013071 | 0.372706730 | 0 | 30.32343023 | 0.372708 | 0 | 7.001400 | , | 199.7710941 | 0.372700730 | 2.2303 | 70.7700040 | 7 10.020 | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | . | | | | | | _ | | | | | , | | | |
| Season 2 | 0.15 | 0.15 | | 0.15 | | 0.15 | | 0.15 | 0 | · C | y C | 0 | 1 0 | , | 0 0 | | |
| Wetland Function Factor | -0.4 | | | | | -0.2 | | | | 1 | 1 | 1 | 1 1 | | 1 1 | 1 | |
| Load Season 1 * | 125.3136873 | 7.914548671 | | | | | | | 4.968151 | | 1433.502536 | | | 85.1714909 | | | |
| Load Season 2 ** | 29.86059583 | 0.965469611 | 109.5118387 | 0.068962115 | 0 | 6.758287277 | 0.068962 | 0 | 1.31028 | S C | 36.96369368 | 0.068962115 | 0.4138 | 14.206195 | 7 2.9654 | Total Load | 2279.84238 |
| Wetland Function Value (Both | | | | | | | | 1 | | | | | | 1 | | | |
| Seasons) | -62.06971325 | -3.552007313 | -153.9342146 | -0.071122487 | -0.080611144 | -26.38508177 | -0.08621 | 0 | 6.278431 | 5.421023274 | 1470.46623 | 2.070570709 | 3.9488 | 99.3776866 | 8 10.301 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 93.10456987 | 5.328010969 | 230.9013219 | 0.071122487 | 0.725500295 | 105.5403271 | 0.120317 | 0 | 5.766332 | 4 944684697 | 1356.816261 | 1 887705638 | 3 6363 | 89.6687758 | 6 0 2785 | Final Load | 1907.798764 |
| WATERSHED FUNCTION | 33.10430307 | 3.320010303 | 230.3013213 | 0.071122407 | 0.723300233 | 103.3403271 | 0.123317 | | 3.700332 | 4.344004037 | 1330.010201 | 1.007733030 | 3.050. | 09.0007730 | 0 3.2703 | % Net | 16.32 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | Reiliovai | 10.32 |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48. | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | | | | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 2190 | 231.6646835 | | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | 0 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | | | | 7.081466 | | 199.7718941 | | | 3 76.7780040 | | | |
| Concentration/Export Coefficient | 101.3020921 | 3.217922007 | 391.0013071 | 0.372706730 | 0 | 30.32343023 | 0.372708 | 0 | 7.001400 | , | 199.7710941 | 0.372700730 | 2.2303 | 70.7700040 | 7 10.020 | | |
| Season 1 | 0.04 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.04 | 0.21 | 1.1 | 0.5 | | 0.5 | | | 1 0.04 | | |
| Concentration/Export Coefficient | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 1 0. | 1 0.04 | | |
| | | | . | | . | | | | _ | | | | | | _ | | |
| Season 2 | 0.15 | | | | | 0.15 | | 0.15 | 0 | 0 | 0 | 0 | |) | 0 0 | | |
| Wetland Function Factor | -0.4 | | | | | | | | | | 1 | | 1 | | 1 1 | | |
| Load Season 1 * | 60.01072077 | 2.09261231 | | | | | | | 2.333815 | | 288.0466524 | | | 33.5816003 | | | |
| Load Season 2 ** | 29.86059583 | 0.965469611 | 109.5118387 | 0.068962115 | 0 | 6.758287277 | 0.068962 | 0 | 1.31028 | 0 | 36.96369368 | 0.068962115 | 0.4138 | 14.206195 | 7 2.9654 | Total Load | 843.8170599 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -35.94852664 | -1.223232769 | | -0.068232869 | | | | | 3.644095 | | 325.0103461 | | | 47.7877960 | | | |
| Net Yield | 53.92278996 | 1.834849153 | 164.7349181 | 0.068232869 | 0.668285867 | 71.23616289 | 0.081879 | 0 | 3.337558 | 0.070870761 | 299.6520642 | 0.274678185 | 1.1195 | 43.1067515 | 2 7.4092 | Final Load % Net | 647.5177008 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 23.26 |
| Scenario 4 - Extreme High Flow | | | 1 | | | | | | | 1 | 1 | 1 | | 1 | | | |
| (existing conditions) | | 1 | | | | | | 1 | | | | | | 1 | 1 1 | 1 | |
| 300 and below | 692 | | | 0.5 | 4.4 | 687 | 87.1 | 0.2 | 288.6 | | | | 8211.8 | 3881. | 1 340.7 75077. | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 | 1.3721491 | 1980.011 | 4416.261943 | 360718.7936 | 534.4520823 | 56339 | 26627.2397 | | | |
| Concentration | 0.15 | 0.15 | | 0.15 | | 0.15 | 0.15 | 0.15 | 1.1 | | | | 1.1 | | | | |
| Wetland Function Factor | -0.4 | -0.4 | -0.4 | -0.5 | -0.1 | -0.2 | -0.4 | -0.2 | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 878.4527071 | | | | | | | | | 947.3914342 | 90149.41015 | 114.6524666 | 14080 | 5083.89297 | 5 438.01 | Total Load | 122805.3014 |
| Wetland Function Value | -351.3810828 | -185.0336222 | | | | | | | | | 90149.41015 | | | 5083.89297 | | | |
| Net Yield | 527.0716243 | 277.5504333 | | | | 697.6844044 | 66.34095 | 0.2031105 | 458.2005 | | 83475.04834 | | | 4591.21048 | | Final Load | 110001.5866 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 10.43 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | 70 |
| Flow (existing conditions) | | 1 | | | | | | 1 | | | | | | 1 | 1 1 | 1 | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | 0 | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 1 836. | 7 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | | | | | | | | 216.9195 | | 29998.55224 | | | 7 2191.98727 | | | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | 0.15 | | | | | | | | | |
| Wetland Function Factor | | | | | | | | | | | | | | | | _ | |
| | -0.4 | | | | | -0.2 | | | | | | | | | 1 1 | Total I av. 1 | 40570 4004 |
| Load | 240.4797221 | 38.92465569 | | 0.24237021 | | | | | 72.98293 | | 10648.12524 | | | | | Total Load | 13576.4664 |
| Wetland Function Value | -96.19188886 | -15.56986228 | | | | | | | 72.98293 | | 10648.12524 | | | | | | 40400 0: |
| Net Yield | 144.2878333 | 23.35479341 | 972.874022 | 0.121185105 | 0.959786031 | 229.6506212 | U.465351 | - 0 | 72.98293 | 143.5609617 | 10093.06353 | 3.831698266 | 63.816 | 398.885327 | 1 46.06 | Final Load | 12193.91389 |
| | | 1 | 1 | I | 1 | | 1 | 1 | l . | 1 | 1 | 1 | 1 | 1 | 1 1 | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 10.18 |

Table C6. Expected Watershed Functions for Phosphorus - New Madrid Floodway.

| New Madrid Floodway - Hi | ah Retention Sc | enario - Phosphor | rus | | | | | | | | | | | | | | |
|---|-----------------------------|----------------------|--------------|----------------------------|--------------|---------------|----------|------------|-----------------|--------------------|--------------|-----------------|--------|------------------|------------------|---------------------|-------------|
| | | | | | | | | | | | | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | 0.7 | | 42 | 0.1 | 0 | 0.9 | 0 | 0 | 0.0 | C | 18 | 0 | | | 9 1.7 73. | | |
| 275 ft Volume = 388 | 6.7 35.5622435 | | | 0.530779754 | | | | | 0.8 4.246238 | | 95.54035568 | | | 1 2. | | 1 | |
| Concentration/Export Coefficient | 0.21 | | | | 0.21 | 0.21 | | | | | | | | | | | |
| Wetland Function Factor | -0.9 | | | -0.5 | | -0.9 | | | | | | | | | | | |
| Load | 9.212089788 | | | 0.137493877 | | | | | 1.456087 | | 32.76195794 | | | | | Total Load | 109.204113 |
| | | | | | | | | | | | | | | | | TOTAL LOAG | 109.2041138 |
| Wetland Function Value | -8.290880809 0.921208979 | | | -0.12374449 0.013749388 | | | | | 0.291217 | | 6.552391587 | | 0.0364 | | | Final Load | 440044550 |
| Net Yield | 0.921208979 | 0 | 5.774742852 | 0.013749388 | 0 | 0.12374449 | 0 | 0 | 0.269218 | | 6.057413629 | U | 0.0337 | 0.7411906 | 4 0.4262 | % Net | 14.36115584 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 86.85 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 9.9 2370. | R | |
| 280 ft | 43.3 | | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0.111303133 | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | 3 76.7780040 | | | |
| Concentration/Export Coefficient | 101.3020321 | 3.217322007 | 331.0013071 | 0.572700730 | | 30.32343023 | 0.372703 | - | 7.001400 | | 133.77 10341 | 0.372700730 | 2.2000 | 70.7700040 | 10.020 | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.45 | 0.15 | 0.15 | | | | | | | | | |
| | | | | | | 0.15 | | | | | 0 | 0 | 1 (| , | 0 00 | + | |
| Wetland Function Factor | -0.9 | | | -0.9 | | | | | 0.2 4.968151 | | | | | 0. 85.1714909 | | + | |
| Load Season 1 * | 125.3136873 | 7.914548671 | | | | | | | | | 1433.502536 | | | | | Total I av. 1 | 0070 0 100 |
| Load Season 2 ** | 29.86059583 | 0.965469611 | 109.5118387 | 0.068962115 | 0 | 6.758287277 | U.U68962 | 0 | 1.31028 | | 36.96369368 | 0.068962115 | 0.4138 | 14.206195 | / 2.9654 | Total Load | 2279.84238 |
| Wetland Function Value (Both Seasons) | -139.6568548 | -7.992016454 | -346.3519828 | -0.128020476 | -0.725500295 | -118.732868 | 0,000- | | 1.255686 | 4 00 100 1 | 294.093246 | 0.4 | | 19.8755373 | 4 0 0004 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers | -139.6568548 | -7.992016454 | -346.3519828 | -0.128020476 | -0.725500295 | -118./32868 | -0.19398 | 0 | 1.255686 | 1.084204655 | 294.093246 | 0.414114142 | 0.7898 | 19.8755373 | 4 2.0601 | | |
| ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 15.51742831 | 0.888001828 | 38.48355365 | 0.014224497 | 0.080611144 | 13.19254089 | 0.021553 | 0 | 1.153266 | 0.988936939 | 271.3632521 | 0.377559128 | 0.7273 | 17.9337551 | 7 1.8557 | Final Load | 362.5976321 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 84.10 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 9 48. | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | | | 0.1 | 0 | 9.8 | | | | | | | 0.6 | 3 20. | 6 4.3 294. | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | 637.1430271 | 0.260590195 | 2.866492147 | 317.6594479 | 0.26059 | 0 | 6.775345 | 0.260590195 | 836.2339362 | 0.781770585 | 2.3453 | 125.865064 | 3 20.065 | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | | | | 7.081466 | | 199.7718941 | | | 3 76.7780040 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient | 0.21 | 0.2. | 0.21 | U.L. | 0.21 | 0.21 | 0.21 | 0.21 | | 0.0 | | 0.0 | | 0. | . 0.01 | | |
| | 0.45 | 0.45 | 0.45 | 0.40 | 0.15 | 0.15 | 0.45 | 0.15 | | | | | | | | | |
| Season 2 | 0.15 | | | | | | | | | | 0 | |) (|) | 0 | | |
| Wetland Function Factor | -0.9 | | | | | | | | | | | | | | | | |
| Load Season 1 * | 60.01072077 | 2.09261231 | | | | | | | 2.333815 | | 288.0466524 | | | | | T | 040.0470500 |
| Load Season 2 ** | 29.86059583 | 0.965469611 | 109.5118387 | 0.068962115 | U | 6.758287277 | 0.068962 | 0 | 1.31028 | | 36.96369368 | 0.068962115 | 0.4138 | 14.206195 | 7 2.9654 | Total Load | 843.8170599 |
| Wetland Function Value (Both | | | | | | | | _ | | | | | | | _ | | |
| Seasons) | -80.88418494 | -2.752273729 | | -0.122819164 | | | | | 0.728819 | | 65.00206922 | | | 9.55755921 | | | |
| Net Yield | 8.98713166 | 0.305808192 | 27.45581968 | 0.013646574 | 0.074253985 | 8.904520361 | 0.013647 | 0 | 0.667512 | 0.014174152 | 59.93041283 | 0.054935637 | 0.2239 | 8.62135030 | 3 1.4818 | Final Load % Net | 116.7489435 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 86.16 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | 1 | | | |
| (existing conditions) | | | | | | | 1 | 1 | 1 | - | | - | | | | | |
| 300 and below | 692 | | | | | 687 | | | | | | | | | | / | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | | 4713.332228 | | | | | 360718.7936 | | | | | | |
| Concentration | 0.15 | 0.15 | | 0.15 | | 0.15 | | | | 0.5 | | | | | | 1 | |
| Wetland Function Factor | -0.9 | | | | | -0.9 | | | | | | | | | | | |
| Load | 878.4527071 | | | | | | | | | | 90149.41015 | | | 5083.89297 | | Total Load | 122805.3014 |
| Wetland Function Value | -790.6074364 | -416.32565 | | | | -784.8949549 | | | | | 18029.88203 | | | 1016.77859 | | | |
| Net Yield | 87.84527071 | 46.25840556 | 916.6882498 | 0.063472016 | 0.558553744 | 87.21055054 | 11.05683 | 0.0253888 | 91.6401 | 173.1355121 | 16695.00967 | 20.95270528 | 2607.5 | 918.242097 | 8 78.953 | Final Load % Net | 21735.1591 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 82.3 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | 0 | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 1 836. | 7 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | | | | | | | | 216.9195 | | 29998.55224 | | | 7 2191.98727 | | + | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | _ | |
| Wetland Function Factor | -0.9 | | | -0.9 | | -0.9 | | | | | | | | | | Tetal | 40500 407 |
| Load | 240.4797221 | 38.92465569 | | 0.24237021 | | | | | 76.99658 | | 10648.12524 | | | | | Total Load | 13580.4801 |
| Wetland Function Value | -216.4317499 | -35.03219012 | | | | | | | 15.39932 | | 2129.625048 | | | 87.8887116 | | | 0000 11 |
| Net Yield | 24.04797221 | 3.892465569 | 162.1456703 | 0.024237021 | 0.106642892 | 28.70632765 | 0.077558 | 0 | 14.59659 | 28.71219234 | 2018.612706 | 0.766339653 | 12.763 | 79.7770654 | 3 9.212 | Final Load | 2383.44093 |
| | | 1 | | | 1 | | | | 1 | 1 | | 1 | 1 | 1 | | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 82.4 |

Table C7. High Watershed Functions for Phosphorus - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario A - Phosph | orus | | | | | | | | | | | | | | |
|---|-------------------|--------------------------|--------------|--------------|--------------|---------------|-------------|-------------|-----------|--------------------|--------------|-----------------|----------|--------------|--------------------|------------------|-------------|
| Contour Range | Cupross/Tupolo 16 | Scrub/shrub marsh 19 | DI II 42 | Riparian 43 | River 45 | Onen water 24 | March 20 | Condhor 21 | Cotton 26 | Cotton/soybeans 37 | Caubaana 20 | Saubanna/aam 20 | Com 40 | Horb Vog 4: | I Booturo I C Toto | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | SCIUD/SIIIUD IIIaiSII 19 | DLIT 42 | Nipaliali 43 | KIVEI 43 | Open water 24 | IVIAISII 29 | Sariubai ST | COROTI 30 | COROT/SOYDEATS 37 | Suybeans 36 | Suybeans/com 39 | COIII 40 | neib. veg. 4 | rasiule LC Tota | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | | 42 | 0.1 | 0 | 0.9 | | 0 | 0.8 | | 18 | 3 0 | 0. | 1 2 | 9 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | | | 0.530779754 | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | | |
| Concentration/Export Coefficient | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1. | 1 0 | 1 0.04 | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | | 1 | 1 1 | | |
| Load | 9.212089788 | (| 57.74742852 | 0.137493877 | 0 | 1.237444897 | C | 0 | 1.456087 | (| 32.76195794 | 1 (| 0.182 | 2 4.10468544 | 5 2.3649 | Total Load | 109.2041139 |
| Wetland Function Value | -0.921208979 | (| -5.774742852 | -0.013749388 | 0 | -0.12374449 | C | 0 | 1.456087 | ' (| 32.76195794 | 1 (| 0.182 | 2 4.10468544 | 5 2.3649 | | |
| Net Yield | 8.290880809 | (| 51.97268567 | 0.12374449 | 0 | 1.113700407 | C | 0 | 1.346092 | ! (| 30.28706814 | 1 (| 0.168 | 3.70595320 | 1 2.1312 | Final Load | 99.13956205 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.22 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 1 2.4 | 1 3. | 7 113. | 1 9.9 2370. | 8 | |
| 280 ft | 43.3 | 1.4 | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 7 319.960224 | | 0 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | | 36.52545825 | | | 7.081466 | | 199.7718941 | | | 3 76.7780040 | | | |
| Concentration/Export Coefficient | 101.3020321 | 3.217322007 | 331.0013071 | 0.572700750 | , | 30.32343023 | 0.572703 | - | 7.001400 | 1 | 133.77 10341 | 0.372700730 | 2.200 | 70.7700040 | 7 10.020 | | |
| Season 1 Concentration/Export Coefficient | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1. | 1 0 | 1 0.04 | | |
| Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | _ | , | |) . |) 4 | | 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | | 1 | 1 | í · | 1 | 1 1 | 1 | |
| Load Season 1 * | 125.3136873 | 7.914548671 | | 0.073282858 | | | | | 4.968151 | 5 42102327/ | 1433.502536 | 2.001608594 | 1 3.53 | 5 85 1714909 | | 1 | |
| Load Season 2 ** | 29.86059583 | 0.965469611 | | 0.068962115 | | 6.758287277 | | | 1.31028 | | 36.96369368 | | | 3 14.206195 | | Total Load | 2279.84238 |
| Wetland Function Value (Both | 29.00009563 | 0.900409011 | 108.0116367 | 0.000902113 | , , | 0.130201211 | 0.000902 | - 0 | 1.31020 | | 30.80308308 | 0.000902115 | 0.413 | 14.200193 | 1 2.3004 | TOTAL LUAG | 2213.04230 |
| Seasons) | -15.51742831 | -0.888001828 | -38.48355365 | -0.014224497 | -0.080611144 | -13.19254089 | -0.02155 | _ | 6.278431 | 5 42402227 | 1470.46623 | 2.070570700 | 3 040 | 99.3776866 | 8 10 301 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | -13.31742031 | -0.000001020 | 30.4033303 | -0.014224431 | -0.500011144 | -13.13234003 | -0.02130 | | 0.270431 | 3.421023274 | 1470.40020 | 2.070370703 | 3.340 | 33.3770000 | 0 10.301 | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 139.6568548 | 7.992016454 | 346.3519828 | 0.128020476 | 0.725500295 | 118.732868 | 0.193975 | 0 | 5.766332 | 4.944684697 | 1356.816261 | 1.887795638 | 3.636 | 89.6687758 | 6 9.2785 | Final Load | 2085.779813 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 8.51 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 9 48. | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | 1.4 | | 0.1 | 0 | 9.8 | | | | | | | 0.0 | 6 20. | 6 4.3 294. | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | 637.1430271 | 0.260590195 | 2.866492147 | 317.6594479 | 0.26059 | 0 | 6.775345 | 0.260590195 | 836.2339362 | 0.781770585 | 2.345 | 3 125.865064 | 3 20.065 | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | | 199.7718941 | 0.372708758 | 3 2.236 | 3 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1. | 1 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0 |) (| 0 |) (|) (| ol | 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | | 1 | 1 1 | | |
| Load Season 1 * | 60.01072077 | 2.09261231 | | | | | | | 2.333815 | 0.077621123 | 288.0466524 | 0.232863369 | 0.8079 | 33.5816003 | 7 5.2601 | | |
| Load Season 2 ** | 29.86059583 | 0.965469611 | | 0.068962115 | | 6.758287277 | | | 1.31028 | | 36.96369368 | | | | | Total Load | 843.8170599 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -8.98713166 | -0.305808192 | -27.45581968 | -0.013646574 | -0.074253985 | -8.904520361 | -0.01365 | 0 | 3.644095 | 0.077621123 | 325.0103461 | 0.301825484 | 1.2210 | 47.7877960 | 7 8.2255 | | |
| Net Yield | 80.88418494 | 2.752273729 | 247.1023771 | 0.122819164 | 0.668285867 | 80.14068325 | 0.122819 | 0 | 3.337558 | 0.070870761 | 299.6520642 | 0.274678185 | 1.119 | 43.1067515 | 2 7.4092 | Final Load | 766.7640258 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.13 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | 7221.2 | 0.5 | 4.4 | 687 | 87.1 | 0.2 | 288.6 | 643.7 | 52577.2 | 77.0 | 8211. | 3881 | 1 340.7 75077. | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 0.15 | 2500.055097 | | 0.15 | | 0.15 | | | | | | | | | | 1 | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 0.0 | 1.1 | 1 1 | 1 | 1 | 1 1 | 1 | |
| Load | 878.4527071 | 462.5840556 | | | | | | | | 947 301434 | 90149.41015 | 114.6524666 | 1/100/ | 5083.89297 | 5 438.01 | Total Load | 122805.3014 |
| Wetland Function Value | -87.84527071 | -46.25840556 | | | | | | | | | 90149.41015 | | | 0 5083.89297 | | TOTAL LUAD | 122000.3012 |
| Net Yield | 790.6074364 | 416.32565 | | | | | | | | | 83475.04834 | | | 3 4591.21048 | | Final Load | 113274.622 |
| WATERSHED FUNCTION | 790.0074304 | 410.32300 | 0230.194240 | 0.371246146 | 5.0209637 | 764.6545545 | 99.51140 | 0.2204993 | 436.2003 | 803.0773003 | 63473.04634 | 104.7033204 | 1303 | 4391.21040 | 9 394.70 | % Net Removal | 7.70 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | |
| Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | | 0.5 | | 592.2 | | | | | | | | | | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | 8763.233449 | 1.309900366 | 5.763561611 | 1551.445994 | 4.191681 | 0 | 216.9195 | 588.9312046 | 29998.55224 | 15.71880439 | 189.67 | 7 2191.98727 | 3 266.7 | | |
| Concentration | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 1.1 | 0.5 | 1.1 | 0.5 | 1. | 1 0. | 1 0.04 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | | | | | | 1 1 | | |
| Load | 240.4797221 | 38.92465569 | | 0.24237021 | | | | | 72.98293 | | 10648.12524 | | | | | Total Load | 13576.4664 |
| Wetland Function Value | -24.04797221 | -3.892465569 | | -0.024237021 | | | | | 72.98293 | | 10648.12524 | | | | | | |
| Net Yield | 216.4317499 | 35.03219012 | | | | | | | 72.98293 | | 10093.06353 | | | 398.885327 | | Final Load | 12793.2081 |
| WATERSHED FUNCTION | 210.1017400 | 00.00210012 | 1-100.011000 | 0.210100100 | 0.0007.00001 | | 2.000020 | | . 2.00230 | 1-10.0000011 | . 5000.00000 | 0.007000200 | | 300.000021 | 10.00 | % Net Removal | 5.7 |
| | | 1 | 1 | I . | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 1 | | |

Table C8. Low Watershed Functions for Phosphorus - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario B - Phosph | orus | | | | | | | | | | | | | | |
|--|-----------------------------|-----------------------------|--------------|--------------|--------------|-----------------------------|------------|--------------|----------------------|---------------------|----------------------------|----------------------|-----------------|----------------------------|------------------|------------------|-------------|
| Contour Range | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Sovbeans 38 | Sovbeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | оургова гарою то | COI GOI GOI II GIOI I TO | DETT 12 | Tupunun 10 | 14101-10 | Open water 21 | IVIGION 20 | Curidour o r | OOMOII GO | Collor Goyboario Gr | CO) DOGING GO | CO DCC III CO III CO | 00111 10 | rioib. rog. vi | r doldro Eo rola | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | 0 | | | | 0.9 | | | 0.8 | C | | | | | | 1 | |
| Volume = 388 Concentration/Export Coefficient | 35.5622435 0.21 | 0.21 | | | 0.21 | 4.777017784 0.21 | | | 4.246238 | 0.5 | 95.54035568 | | | 15.39261286 | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 0.5 | | 0.5 | 1.1 | 0. | | | |
| Load | 9.212089788 | | | | | | | | 1.456087 | | 32.76195794 | Ö | 0.182 | 4.104685445 | | Total Load | 109.204113 |
| Wetland Function Value | -0.921208979 | 0 | -5.774742852 | | | | | | 1.456087 | | 32.76195794 | | | 4.104685445 | | | |
| Net Yield | 8.290880809 | 0 | 51.97268567 | 0.12374449 | 0 | 1.113700407 | 7 0 | 0 | 1.346092 | C | 30.28706814 | 0 | 0.1683 | 3.70595320 | 2.1312 | Final Load | 99.13956205 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.22 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | | | | 170.8 | | | 5.2 | 6.5 | | | | | | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | 6 | |
| Volume Season 1 = 6707 Volume Season 2 = 1098 | 483.7594905 161.3828921 | 30.55323098 5.217922607 | | | | 483.1936899 36.52545825 | | | 14.71081 7.081466 | | 4244.635903 | | | 319.9602244 76.77800407 | | | |
| Concentration/Export Coefficient | 101.3020921 | 5.217922007 | 591.0015071 | 0.3/2/06/56 | 0 | 36.52545625 | 0.372709 | 0 | 7.061400 | | 199.7718941 | 0.372706756 | 2.2303 | 76.7760040 | 16.026 | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0.4 | 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 0.15 | 0.15 | | | | 0.15 | | | | C | 0 | 0 | | (| 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 0.070000774 | | | 4.055 | 07.400000 | 1 1 | | |
| Load Season 1 * Load Season 2 ** | 125.3136873 29.86059583 | 7.914548671 0.965469611 | | 0.073282858 | | 125.1671216 6.758287277 | | | 6.125593 1.31028 | 6.078660774 | 1767.46907 | | | 87.46006948 14.206195 | | Total Load | 2619.059087 |
| Wetland Function Value (Both | 29.00009563 | 0.303403011 | 108.5116367 | 0.000902113 | | 0.130201211 | 0.000902 | - 0 | 1.31028 | | 30.80308300 | 0.000902115 | 0.4130 | 14.200195 | 2.3004 | TOTAL LUIG | 2019.008087 |
| Seasons) | -15.51742831 | -0.888001828 | -38.48355365 | -0.014224497 | -0.080611144 | -13.19254089 | -0.02155 | 0 | 7.435873 | 6.078660774 | 1804.432764 | 2.313390709 | 4.7724 | 101.6662652 | 10.381 | | |
| * Export Coefficients were NOT reduced by 50% for upland and ag land covers ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 139.6568548 | 7.992016454 | 346.3519828 | 0.128020476 | 0.725500295 | 118.732868 | 0.193975 | 0 | 6.923774 | 5.602322197 | 1690.782795 | 2.130615638 | 4.4598 | 91.95735436 | 9.3586 | Final Load | 2424.99652 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 7.41 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48.3 | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | 0.1 | | | | | | | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | 637.1430271 | 0.260590195 | | 317.6594479 | 0.26059 | 0 | 6.775345 | | 836.2339362 | 0.781770585 | 2.3453 | 125.8650643 | 20.065 | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | С | 199.7718941 | 0.372708758 | 2.2363 | 76.77800407 | 16.026 | | |
| Concentration/Export Coefficient Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 0.04 | | |
| Concentration/Export Coefficient Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | | | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.13 | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 60.01072077 | | | | | | | | 2.912536 | 0.087738623 | 359.4741789 | 0.263215869 | 1.0082 | 34.55895087 | | | |
| Load Season 2 ** | 29.86059583 | 0.965469611 | 109.5118387 | 0.068962115 | 0 | 6.758287277 | 0.068962 | | 1.31028 | | 36.96369368 | | 0.4138 | 14.2061957 | 2.9654 | Total Load | 917.1037782 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) Net Yield | -8.98713166 80.88418494 | -0.305808192 2.752273729 | | | | | | | 4.222816 3.916279 | | 396.4378726 | | | 48.7651465 | | Final Load | 840.0507441 |
| WATERSHED FUNCTION | 00.00410494 | 2.752273729 | 247.1023771 | 0.122819104 | 0.000203007 | 80.14068323 | 0.122819 | 0 | 3.916279 | 0.000986261 | 3/1.0/9590/ | 0.303030663 | 1.3190 | 44.00410202 | 7.4715 | % Net Removal | 8.40 |
| | | | | | | | | | | | | | | | | | |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | |
| (existing conditions) | | | | | | | | ļ | 005 - | | | | 004: | 007: | 040 7 75 | _ | |
| 300 and below Volume = 515089 | 692 4747.635956 | 364.4 2500.055697 | | | | 687 4713.332228 | | | | 643.7 | 52577.2 | | 8211.8 56339 | | | / | |
| Concentration | 4/4/.b3595b 0.15 | 2500.055697 | | | 30.18728064 | 4/13.332228 | | | 1980.011 | 4416.261943 | | | 56339 | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | | | | 0. | | | |
| Load | 878.4527071 | 462.5840556 | 9166.882498 | 0.634720164 | 5.585537444 | 872.1055054 | 110.5683 | 0.2538881 | 494.8365 | | 90149.41015 | | | 5083.892975 | | Total Load | 122805.3014 |
| Wetland Function Value | -87.84527071 | -46.25840556 | | | | -87.21055054 | | | | 947.3914342 | 90149.41015 | 114.6524666 | 14080 | 5083.892975 | | | |
| Net Yield | 790.6074364 | 416.32565 | 8250.194248 | 0.571248148 | 5.0269837 | 784.8949549 | 99.51143 | 0.2284993 | 458.2005 | 865.6775603 | 83475.04834 | 104.7635264 | 13038 | 4591.210489 | 394.76 | Final Load | 113274.6227 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 7.76 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 2 1.6 | 0 | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 836.7 | 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | 8763.233449 | 1.309900366 | 5.763561611 | 1551.445994 | 4.191681 | 0 | 216.9195 | 588.9312046 | 29998.55224 | | | 2191.987273 | 3 266.7 | | |
| Concentration | 0.15 | 0.15 | 0.15 | | | 0.15 | 0.15 | 0.15 | | 0.5 | | 0.5 | 1.1 | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | 151 1570000 | | 1 10051 | 1 07.0 | 100 11055 | | T | 10570 1 |
| Load Wetland Function Value | 240.4797221 -24.04797221 | 38.92465569 -3.892465569 | | | | 287.0632765 -28.70632765 | | | 72.98293 72.98293 | | 10648.12524 10648.12524 | | | | | Total Load | 13576.4664 |
| Net Yield | 216.4317499 | -3.892465569 35.03219012 | | | | -28.70632765 258.3569488 | | | 72.98293 | | 10048.12524 | | | 398.885327 | | Final Load | 12793.2081 |
| | | | | | | | | | | | | | | | | % Net Removal | 5.7 |

Table C9. Low (no runoff reduction) Watershed Functions for Phosphorus - New Madrid Floodway.

| | | , | eason 2), Runoff Co | | | | | | | | | | | | | | |
|--|-------------------|----------------------|---------------------|--------------|--------------|---------------|----------|------------|------------|---------------------|-------------|-----------------|--------|---------------|------------------|---------------------|------------|
| Contour Range Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 75 ft | 6.7 | (| 42 | 0.1 | 0 | 0.9 |) (| 0 | 0.8 | | 18 | | 0.1 | 2.9 | 9 1.7 73. | 1 | |
| /olume = 388 | 35.5622435 | C | | | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | 1 | |
| Concentration/Export Coefficient | 0.21 | 0.21 | | 0.21 | | 0.21 | | | | | | | | | | | |
| Wetland Function Factor | -0.4 | -0.4 | -0.4 | -0.5 | -0.1 | -0.2 | -0.4 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 9.212089788 | (| | | 0 | 1.237444897 | · C | | 1.456087 | 0 | 32.76195794 | 0 | 0.182 | 4.10468544 | 5 2.3649 | Total Load | 109.204113 |
| Wetland Function Value | -3.684835915 | (| -23.09897141 | -0.068746939 | 0 | -0.247488979 |) C | 0 | 1.456087 | 0 | 32.76195794 | 0 | 0.182 | 4.10468544 | 5 2.3649 | | |
| Net Yield | 5.527253873 | (| 34.64845711 | 0.068746939 | 0 | 0.989955917 | ' C | 0 | 1.346092 | 2 0 | 30.28706814 | 0 | 0.1683 | 3.70595320 | 1 2.1312 | Final Load | 78.8729645 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 27.7 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 113. | 1 9.9 2370. | 8 | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483 7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | 10.467 | 319.960224 | | 1 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | 0.372708758 | | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | 76.7780040 | | | |
| Concentration/Export Coefficient | 101.0020021 | O.ETT OEECOT | 001.0010011 | 0.072700700 | , | 00.02010020 | 0.072700 | | 1.001100 | | 100.7710071 | 0.072700700 | 2.2000 | 70.7700010 | 10.020 | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | l - | | | | | 1 1 | |
| Season 2 | 0.42 | 0.42 | | 0.42 | | 0.42 | | | | 0 | 0 | | 1 0 | 1 | 0 0 | + | |
| Wetland Function Factor | -0.4 | -0.4 | | | | -0.2 | | | | 1 1 | 1 | 1 | 1 | 05 474 45 | 1 1 | + | |
| Load Season 1 * | 125.3136873 | 7.914548671 | | | | | | | 4.968151 | | 1433.502536 | | | 85.1714909 | | + | 0045 50: |
| Load Season 2 ** | 83.60966831 | 2.703314911 | 306.6331485 | 0.193093922 | 2 0 | 18.92320438 | 0.193094 | 0 | 3.668785 | 0 | 103.4983423 | 0.193093922 | 1.1586 | 39.7773479 | 7 8.303 | Total Load | 2645.53468 |
| Wetland Function Value (Both | | | | | | l | 1 | | | | l | | | | . | 1 1 | |
| Seasons) * Export Coefficients were reduced by 50% for upland and | -83.56934224 | -4.247145433 | -232.7827385 | -0.13318839 | -0.080611144 | -28.81806519 | -0.13586 | 0 | 8.636935 | 5.421023274 | 1537.000879 | 2.194702516 | 4.6936 | 124.948838 | 9 15.638 | | |
| ag land covers *** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | 105.05.1010.1 | 0.070740440 | 0404744077 | 0.40040000 | 0.70550005 | 445.0700000 | 0.000700 | | 7.000000 | 4 0 4 4 0 0 4 0 0 7 | 4440.007444 | 4 00054 400 | 4.0000 | 440.000040 | 11000 | | 0450 00500 |
| Net Yield | 125.3540134 | 6.370718149 | 349.1741077 | 0.13318839 | 0.725500295 | 115.2722608 | 0.203796 | 0 | 7.888986 | 4.944684697 | 1416.697444 | 1.999514264 | 4.3066 | 112.682812 | 9 14.082 | Final Load % Net | 2159.83598 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 18.3 |
| Scenario 3 - Avoid and Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48. | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | 1 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | 0.372708758 | | | | | 7.081466 | 0 | 199.7718941 | 0.372708758 | | 76.7780040 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0 | | 0 | 0 | | | 0 0 | | |
| Wetland Function Factor | -0.4 | -0.4 | | | | -0.2 | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 60.01072077 | 2.09261231 | | | | | | | 2.333815 | 0.077621123 | 288.0466524 | 0.232863369 | 0.8079 | 33.5816003 | 7 5.2601 | _ | |
| Load Season 2 ** | 83.60966831 | 2.703314911 | | | | 18.92320438 | | | 3.668785 | | 103.4983423 | | | 39.7773479 | | Total Load | 1209.50936 |
| Wetland Function Value (Both | 00.00000001 | 2.700011011 | 000.0001100 | 0.100000022 | | 10.02020100 | 0.10000 | | 0.000700 | | 100.1000120 | 0.100000022 | 1.1000 | 00.7770470 | 0.000 | Total Load | 1200.00000 |
| Seasons) | -57 44815563 | -1.918370888 | -188.6718026 | -0.130298773 | -0.074253985 | -20.24202414 | -0 10424 | | 6.0026 | 0.077621123 | 391.5449947 | 0.425957291 | 1.9664 | 73.3589483 | 4 13.563 | | |
| Net Yield | 86.17223345 | 2.877556333 | | 0.130298773 | | 80.96809657 | | 0 | 5.460212 | | 359.5332479 | | | 66.1207885 | | Final Load | 899.55492 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 25.6 |
| | | | | | | | | | | | | | | | | Removai | 25.0 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | | | | 687 | | | | | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | | | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Wetland Function Factor | -0.4 | -0.4 | | | | -0.2 | | | | | | | | | | | |
| Load | 878.4527071 | 462.5840556 | | | | | | | | | 90149.41015 | | | 5083.89297 | | Total Load | 122805.301 |
| Wetland Function Value | -351.3810828 | -185.0336222 | | -0.317360082 | | | | | | | 90149.41015 | | | 5083.89297 | | | |
| Net Yield | 527.0716243 | 277.5504333 | 5500.129499 | 0.317360082 | 5.0269837 | 697.6844044 | 66.34095 | 0.2031105 | 458.2005 | 865.6775603 | 83475.04834 | 104.7635264 | 13038 | 4591.21048 | 9 394.76 | Final Load % Net | 110001.586 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 10.4 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | 3345 | 0.5 | 5 2.2 | 592.2 | 1.6 | n | 82.8 | 224.8 | 11450.7 | 6 | 72.4 | 836. | 7 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | | | | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | 1 | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | | 1.1 | | | | | | | + | |
| Wetland Function Factor | -0.4 | -0.4 | | | | -0.2 | | | | | | 0.3 | 1.1 | 0. | 1 1 | + | |
| Load | 240.4797221 | 38.92465569 | | | | | | | 72.98293 | | 10648.12524 | 4.122542517 | 67 326 | 439.44355 | 8 50 005 | Total Load | 13576.4664 |
| | -96.19188886 | -15.56986228 | | | | | | | 72.98293 | | 10648.12524 | | | | | , otal Load | 13370.4004 |
| | | | -040.0020014 | 0.121100100 | | | | 1 0 | 1 12.30293 | | | | | | UCCC.UC | 1 | |
| Wetland Function Value | | | | 0.121105105 | 0.050796024 | 220 6506242 | 0.465254 | Λ. | 72 08202 | 1/13 5600617 | 10003 06353 | 3 831600000 | 63 844 | 308 885227 | 1 46.06 | Final Load | 12103 0420 |
| Wetland Function Value Net Yield | 144.2878333 | 23.35479341 | 972.874022 | 0.121185105 | 0.959786031 | 229.6506212 | 0.465351 | 0 | 72.98293 | 143.5609617 | 10093.06353 | 3.831698266 | 63.816 | 398.885327 | 1 46.06 | Final Load % Net | 12193.9138 |

Table C10. Expected (concentration doubled) Watershed Functions for Phosphorus - New Madrid Floodway.

| New Madrid Floodway - Ex | pected Concen | trations, Runoff C | oefficients, and Fu | nction Factors - Orga | anic Carbon | | | | | | | | | | | | | |
|---|----------------------------|-------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------|------------|--------------------|----------------------------|----------------------------|------------------|--------|------------------------------|----------|-------------|---------------------------|---------------------------|
| Contour Range | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BI H 42 | Riparian 43 R | iver 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Sovbeans 38 | Sovbeans/corn 39 | Com 40 | Herb. Veg. 41 | Pasture | I C Total | | |
| Scenario 1 - Existing | -,,, | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | | | | C | 0.9 | | | | | 18 | 0 | | | | | | |
| Volume = 388 | 35.5622435 | | | 0.530779754 | C | 4.777017784 | | | 4.246238 | | 95.54035568 | | | | | | | |
| Concentration/Export Coefficient | 4 | | | 4 | 4 | 4 | 4 | | | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Wetland Function Factor | 3.0 | | | | -0.1 | -0.2 | | | | 1 | 1 | 1 | 1 | | 1 1 | | | |
| Load | 175.4683769 | | | | 0 | | | | 22.11698 | | 497.6321398 | | 2.7646 | | | | Total Load | 1951.29511 |
| Wetland Function Value | 140.3747015 | | | | | | | | 22.11698 | | 497.6321398 | | | | | | | |
| Net Yield WATERSHED FUNCTION | 140.3747015 | 5 (| 879.9608155 | 1.309465499 | C | 18.85630319 | 0 | 0 | 20.02184 | C | 450.4913818 | 0 | 2.5027 | 72.5791670 | 42.546 | | % Net Removal | 1628.642811 16.54 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | | |
| (2 seasons) 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 3 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 00 | 2370.8 | | |
| 280 ft | 43.3 | | | | 1.1 | 9.8 | | | | | 53.6 | 0.1 | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | | | | 3.111903155 | | | | 14.71081 | 18 38851864 | 4244.635903 | | | 319.960224 | | | | |
| Volume Season 2 = 1098 | 161.3828921 | | | 0.372708758 | 3.111303130 | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | | | | | |
| Concentration/Export Coefficient | 101.302032 | 3.21732200 | 331.0013071 | 0.572700730 | | 30.32343020 | 0.512103 | - | 7.001400 | | 133.7710341 | 0.372700730 | 2.2500 | 70.7700040 | 10.020 | | | |
| Season 1 | 4 | | 4 4 | 4 | 4 | | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Concentration/Export Coefficient | | | | | | | | i | | | | | - | | | | | |
| Season 2 | 4 | 1 | 4 | 4 | 4 | . 4 | 4 | 4 | 0 | - C | 0 | 0 | 0 |) | 0 0 | | | |
| Wetland Function Factor | 0.8 | 3 0.8 | 3 0.8 | -0.5 | -0.1 | -0.2 | 0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | | |
| Load Season 1 * | 2386.927377 | 150.753308 | 5244.26091 | 1.395863963 | 15.3545036 | 2384.135649 | 2.791728 | 0 | 76.37292 | | 22036.52429 | | | | | | | |
| Load Season 2 ** | 796.2825554 | 25.74585629 | 2920.3157 | 1.838989735 | C | 180.2209941 | 1.83899 | 0 | 34.9408 | C | 985.6984981 | 1.838989735 | 11.034 | 378.831885 | 79.077 | | Total Load | 39707.75102 |
| Wetland Function Value (Both | | | | | | | | | _ | | | | | | | | | |
| Seasons) * Export Coefficients were reduced by 50% for upland and | 2546.567946 | 141.199331 | 6531.661287 | -1.617426849 | -1.53545036 | -512.8713286 | 3.704574 | 0 | 111.3137 | 95.46614761 | 23022.22279 | 37.08802885 | 65.376 | 2039.94285 | 224.48 | | | |
| ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | | |
| Net Yield | 2546.567946 | 141.199331 | 5 6531.661287 | 1.617426849 | 13.81905324 | 2051.485315 | 3.704574 | 0 | 100.5611 | 86.39303185 | 20829.29865 | 33.55405637 | 59.108 | 1844.18745 | 202.75 | | Final Load | 34445.90952 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 13.25 |
| Scenario 3 - Avoid and Minimize (2 seasons) | | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3. | 1 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48 | 3 7.7 | 840.4 | | |
| 280 ft | 43.3 | | | | 1.1 | 9.6 | | | | | 53.6 | | | | | | | |
| Volume Season 1 = 2190 | 231.6646835 | | | | 2.866492147 | | | | 6.775345 | | 836.2339362 | | | | | | | |
| Volume Season 2 = 1098 | 161.3828921 | | | 0.372708758 | 0 | 36.52545825 | | | 7.081466 | C | 199.7718941 | 0.372708758 | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | 10.000 | | | |
| Season 1 | 4 | | 4 | 4 | 4 | . 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 2 Wetland Function Factor | 0.8 | 3 0.1 | 3 0.8 | -0.5 | -0.1 | -0.2 | 0.8 | -0.2 | - 0 | | 0 | 0 | |) |) 0 | | | |
| Load Season 1 * | 1143.061348 | | | | 14.14361623 | | | | 35.32436 | 4.050000004 | 4359.841403 | 4.075887881 | 12.228 | 656.217948 | 1 104.61 | | | |
| Load Season 2 ** | 796.2825554 | | | | 14.14301023 | 180.2209941 | | | 34.9408 | | 985.6984981 | 1.838989735 | | | | - | Total Load | 16502.06991 |
| Wetland Function Value (Both | 790.2023334 | 23.74303023 | 2920.3137 | 1.030909733 | | 100.2209941 | 1.03099 | 0 | 34.9400 | | 365.0364361 | 1.030909733 | 11.034 | 370.031003 | 19.011 | | TOTAL LUAU | 10302.0099 |
| Seasons) | 1551.475123 | 52.48411072 | 4851.244682 | -1.562386514 | -1.414361623 | -349.5181658 | 2 /00818 | | 70.26517 | 1 358620204 | 5345.539901 | 5.914877616 | 23 262 | 1035.04983 | 1 183 60 | | | |
| Net Yield | 1551.475123 | | | | 12.72925461 | | | | 63.42805 | | 4834.362193 | | | | | | Final Load | 13896.38072 |
| | 1001.110120 | 02.10111011 | 1001.241002 | 11.002.000014 | 12.72020101 | 1000.012000 | 2.100010 | | 00.12000 | 1.20000000 | 1001.002100 | 0.010210000 | 21.00 | 000.000012 | 100.00 | | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 15.79 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | | | | 4.4 | 687 | | | | | | | 8211.8 | | | 75077.7 | | |
| Volume = 515089 | 4747.635956 | | | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 | 1.3721491 | | | 360718.7936 | | | | | | | |
| Concentration | 4 | | | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | | 3.6 | | 3. | 3.6 | | | |
| Wetland Function Factor | 0.8 | | | | -0.1 | -0.2 | | | | 20700 40570 | 1 4050420 500 | 0750 544770 | | 407000 110 | 1 40000 | | T-4-11 ' | 0007704 000 |
| Load | 23425.40552 | | | | 148.9476652 | | | | | | 1856430.588 | | | | | | Total Load | 2637701.637 |
| Wetland Function Value Net Yield | 18740.32442 18740.32442 | | | | -14.89476652 134.0528987 | | | | | | 1856430.588 1678447.607 | 2750.544776 | | 3 137036.448 9 123898.248 | | | Final Load | 2352901.176 |
| WATERSHED FUNCTION | 10740.32442 | 9000.43903. | 2 193300.10 | 6.402933321 | 134.0326967 | 10004.91740 | 2330.769 | 3.4102707 | 9213.119 | 20049.14913 | 1070447.007 | 2400.039700 | 202148 | 123090.240 | 10070 | | % Net Removal | 10.80 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | | |
| Flow (existing conditions) | | | | | | | | | | | | | | | | <u> </u> | | |
| 290 and below | 496.1 | | | | 2.2 | 592.2 | | | | | 11450.7 | 6 | | | | 17293.3 | \longrightarrow | |
| | 1299.683143 | 210.369998 | 8763.233449 | 1.309900366 | 5.763561611 | 1551.445994 | 4.191681 | | 216.9195 | | 29998.55224 | | | | | | \vdash | |
| Volume = 45305 | 4 | 4 | 4 4 | 4 | 4 | 4 | 4 | 4 | | | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | \longrightarrow | |
| Concentration | | | | | | | | -0.2 | 1 | 1 4 | 1 4 | 1 4 | | III. | 11 4 | 1 | 1 | |
| Concentration Wetland Function Factor | 0.8 | | | | -0.1 | -0.2 | | *0.2 | | | - | | | | | _ | | |
| Concentration Wetland Function Factor Load | 6412.79259 | 1037.99081 | 3 43238.84542 | 6.463205594 | 28.43810461 | 7655.020706 | 20.68226 | 0 | 1190.94 | 3233.372851 | 164699.2104 | | | | | | Total Load | 240685.9420 |
| Concentration Wetland Function Factor Load Wetland Function Value | 6412.79259 5130.234072 | 9 1037.990818 2 830.392654 | 3 43238.84542 7 34591.07634 | 6.463205594 -3.231602797 | 28.43810461 -2.843810461 | 7655.020706 -1531.004141 | 20.68226 16.54581 | 0 | 1190.94 1190.94 | 3233.372851 3233.372851 | 164699.2104 | 86.29998713 | 1041.4 | 12034.5332 | 1464.2 | | | 240685.942 |
| Concentration Wetland Function Factor Load | 6412.79259 | 9 1037.990818 2 830.392654 | 3 43238.84542 7 34591.07634 | 6.463205594 -3.231602797 | 28.43810461 | 7655.020706 -1531.004141 | 20.68226 16.54581 | 0 | 1190.94 | 3233.372851 3233.372851 | | | 1041.4 | 12034.5332 | 1464.2 | | Total Load Final Load Net | 240685.9420 213957.275 |

Table C11. Expected Watershed Functions for Organic Carbon - New Madrid Floodway.

| New Madrid Floodway - Hi | gh Retention So | enario - Organic C | arbon | | | | | | | | | | | | | | |
|---|-------------------|--------------------------|--------------|--------------|--------------|---------------|-------------|------------|-----------|---------------------|--------------|-------------------|----------|--------------|--------------------|---------------------|-------------|
| Contour Range | Cypress/Tupelc 15 | Scrub/shrub marsh 19 | BI H 42 | Riparian 43 | River 45 | Onen water 24 | March 20 | Sandhar 24 | Cotton 26 | Cotton/soybeans 37 | Southeans 20 | Southeans/core 20 | Com 40 | Herb Vec 4 | 1 Paetura I C Tota | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | SCIUD/SIIIUD IIIaiSII 19 | DLIT 42 | Nipalian 43 | KIVEI 43 | Open water 24 | IVIAISII 29 | Sanubai Si | COROTI 30 | Collor/Soybearis 37 | Suybeans 36 | Soybeans/com 39 | COIII 40 | neib. veg. 4 | rasiule LC Tota | - | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | | 42 | 0.1 | 0 | 0.9 |) (| 0 | 0.8 | | 18 | 0 | 0.1 | 1 2. | 9 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | | | 0.530779754 | 0 | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | 1 | |
| Concentration/Export Coefficient | 30.3022433 | 4 | | | 4 | | 1 4 | | | | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | | _ | | -0.9 | | | | | | | | | | | |
| | | -0.5 | | | | | | | | | 497.6321398 | | | | | Total Load | 1951.295111 |
| Load | 175.4683769 | | | | | | | | 22.11698 | | | | | | | TOTAL LOAG | 1951.29511 |
| Wetland Function Value | -157.9215392 | | | -2.357037899 | | | | | 4.423397 | | 99.52642795 | | 0.5529 | | | | |
| Net Yield | 17.54683769 | 0 | 109.9951019 | 0.2618931 | 0 | 2.357037899 |) C | 0 | 4.004368 | C | 90.09827636 | 0 | 0.5005 | 14.5158334 | 1 8.5093 | Final Load | 247.7891759 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 87.30 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | .1 9.9 2370. | | |
| 280 ft | 43.3 | 1.4 | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | U | |
| | | | | | | | | | | | | | | | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | C | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 6 3.6 | | |
| Concentration/Export Coefficient | | | | | | | | | _ | | _ | _ | | | | | |
| Season 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | C | 0 | 0 |) (|) | 0 0 | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | | | | | | | | | | |
| Load Season 1 * | 2386.927377 | 150.753308 | | 1.395863963 | | | | | 76.37292 | | 22036.52429 | | | 1661.11096 | | | |
| Load Season 2 ** | 796.2825554 | 25.74585629 | 2920.3157 | 1.838989735 | 0 | 180.2209941 | 1.83899 | 0 | 34.9408 | C | 985.6984981 | 1.838989735 | 11.034 | 378.831885 | 5 79.077 | Total Load | 39707.75102 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -2864.888939 | -158.8492479 | -7348.118948 | -2.911368329 | -13.81905324 | -2307.920979 | -4.16765 | _ n | 22.26274 | 19.09322952 | 4604.444557 | 7.41760577 | 13.075 | 407.988570 | 8 44.896 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 318.3209932 | 17.64991643 | 816.4576609 | 0.32348537 | 1.53545036 | 256.4356643 | 0.463072 | 0 | 20.11223 | 17.27860637 | 4165.859729 | 6.710811273 | 11.822 | 368.837490 | 2 40.55 | Final Load | 6042.35716 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 84.78 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 9 48. | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | 1.4 | | 0.1 | 0 | 9.8 | | | | | | | 0.6 | 3 20. | 6 4.3 294. | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | 317.6594479 | | | 6.775345 | | 836.2339362 | | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | | | | 7.081466 | | 199.7718941 | | | 76.7780040 | | | |
| Concentration/Export Coefficient Season 1 | 101.3020321 | 3.217322007 | 331.0013071 | 0.372700730 | 4 | 30.32343023 | 0.572700 | 4 | 3.6 | | | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | - | | | | |
| Season 2 | | | ا ا | , | ا ا | | ا ا | | | | | | | | | | |
| | - 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 0 | | 0 | 0.0 | , , | , | 0 0 | | |
| Wetland Function Factor | -0.9 | | | | | | | | | | | | | | 2 0.2 | | |
| Load Season 1 * | 1143.061348 | | | | | | | | 35.32436 | | 4359.841403 | | | 656.217948 | | | |
| Load Season 2 ** | 796.2825554 | 25.74585629 | 2920.3157 | 1.838989735 | 0 | 180.2209941 | 1.83899 | 0 | 34.9408 | | 985.6984981 | 1.838989735 | 11.034 | 378.831885 | 5 79.077 | Total Load | 16502.06991 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -1745.409513 | -59.04462456 | -5457.650267 | -2.812295726 | -12.72925461 | -1572.831746 | -2.8123 | 0 | 14.05303 | 0.271725859 | 1069.10798 | 1.182975523 | 4.6523 | 207.009966 | 9 36.738 | | |
| Net Yield | 193.9343903 | 6.56051384 | 606.4055853 | 0.312477303 | 1.414361623 | 174.7590829 | 0.312477 | 0 | 12.68561 | 0.246010193 | 966.8724385 | 1.069048731 | 4.2002 | 187.012662 | 5 33.177 | Final Load % Net | 2188.961425 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 86.74 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | 364.4 | 7221.2 | 0.5 | 4.4 | 687 | 87.1 | 0.2 | 288.6 | 643.7 | 52577.2 | 77.9 | 8211.8 | 3881. | 1 340.7 75077. | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | A 41.0000000 | 2300.033097 | | | 30.10720004 | 47 13.332220 | | 1.0.21431 | 3.6 | | | | | | | + + | |
| Wetland Function Factor | -0.9 | | | | -0.9 | -0.9 | | -0.9 | | | | | | | | + + | |
| | | | | | | | | | | | | | | | | Total Local | 2627704 627 |
| Load | 23425.40552 | | | | | | | | | | 1856430.588 | | | 137036.448 | | Total Load | 2637701.637 |
| Wetland Function Value | -21082.86497 | -11102.01733 | | -15.23328394 | | -20930.53213 | | | | | 371286.1176 | | | 27407.2896 | | | |
| Net Yield | 2342.540552 | 1233.557482 | 24445.01999 | 1.692587104 | 14.89476652 | 2325.614681 | 294.8487 | 0.6770348 | 1842.624 | 4109.829829 | 335689.5213 | 497.3679411 | 52430 | 24779.6497 | 6 2175.3 | Final Load % Net | 452182.9644 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 82.86 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| | 496.1 | 80.3 | 3345 | 0.5 | 2.2 | 592.2 | 1.6 | 0 | 82.8 | 224.8 | 11450.7 | - | 72.4 | 1 836. | 7 101.8 17293. | 3 | |
| 290 and below | | | | | | | | | | | | | | | | 3 | |
| Volume = 45305 | 1299.683143 | | | | 5.763561611 | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | + | |
| Concentration | 4 | 4 | | | 4 | 4 | | | | | | | | | | 1 | |
| Wetland Function Factor | -0.9 | -0.9 | | | | | | | | | | | | | | | |
| Load | 6412.79259 | 1037.990818 | | | | | | | | | 164699.2104 | | | | | Total Load | 240685.9420 |
| Wetland Function Value | -5771.513331 | -934.1917366 | | | | -6889.518635 | | | 238.188 | | 32939.84209 | | | 2406.90664 | | | |
| Net Yield | 641.279259 | 103.7990818 | | | | | | | 216.7818 | | 29979.51296 | | | 2190.59607 | | Final Load | 39287.26007 |
| | | | | | | | | | | | | | | | | % Net | |
| WATERSHED FUNCTION | | | | | | | | 1 | 1 | | | | 1 | 1 | | Removal | 83.68 |

Table C12. High Watershed Functions for Organic Carbon - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario A - Organio | Carbon | T | T | | | | | | | | | | | | |
|---|--|-------------------------------|--|--|--|-------------------------------------|------------------------------|----------------|--------------------------------|--|-------------------------|--|----------------------------------|---------------|--|-----------------------------|--------------------------|
| | | Scrub/shrub marsh 19 | | Riparian 43 | River 45 | 004 | M | C | C-# 2C | Cotton/soybeans 37 | C 20 | C | C 40 | Harb Man 44 | Destruct I C Tetal | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLIT 42 | Ripariari 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Collon 36 | Cotton/soybeans 37 | Soybeans 36 | Soybeans/com 39 | Com 40 | merb. veg. 41 | Pasture LC Total | | |
| Conditions (No Flood) 275 ft | 6.7 | , | 42 | 0.1 | 0 | 0.9 | | 0 | 0.8 | 0 | 18 | | 0.1 | 2.9 | 9 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | 1 | |
| Concentration/Export Coefficient | 4 | 1 | | | 4 | 44 | 4 | | | 3.6 | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0. | -0.1 | -0.1 | -0.1 | -0.1 | | 1 | 1 | 1 | 1 | - | 1 1 | | |
| Load | 175.4683769 |) (| | | | 23.57037899 | | | 22.11698 | 0 | 497.6321398 | | 2.7646 | 80.1740669 | 6 46.999 | Total Load | 1951.29511 |
| Wetland Function Value | -17.54683769 |) (| -109.9951019 | -0.261893 | 0 | | | 0 | 22.11698 | 0 | 497.6321398 | | 2.7646 | 80.1740669 | 6 46.999 | | |
| Net Yield | 157.9215392 | 2 | 989.9559175 | 2.357037899 | 0 | 21.21334109 | C | 0 | 20.02184 | 0 | 450.4913818 | | 2.5027 | 72.5791670 | 6 42.546 | Final Load | 1759.58936 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.8 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) 285 ft | 171 | 10.8 | 375.7 | 0. | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 113. | 1 9.9 2370.8 | | |
| 280 ft | 43.3 | | | | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | 18 38851864 | 4244.635903 | | | 319.960224 | | 3 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | 36.52545825 | | | 7.081466 | | 199.7718941 | | | 76.7780040 | | | |
| Concentration/Export Coefficient Season 1 | 4 | 0.211022001 | 4 4 | 1 2.072700700 | 4 | 4 | 4 | 4 | 3.6 | | | | | 3.0 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 Wetland Function Factor | -0.1 | -0. | 1 -0.1 | -0. | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 0 | 1 | 1 | 1 1 | | 1 1 | | |
| Load Season 1 * | 2386.927377 | 150.753308 | | | | | | | 76.37292 | 95.46614761 | 22036.52429 | 35.24903912 | 54.342 | 1661.11096 | B 145.4 | | |
| Load Season 2 ** | 796.2825554 | | | | | 180.2209941 | | | 34.9408 | | 985.6984981 | | | 378.831885 | | Total Load | 39707.7510 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) * Export Coefficients were reduced by 50% for upland and | -318.3209932 | -17.64991643 | -816.4576609 | -0.32348537 | -1.53545036 | -256.4356643 | -0.46307 | 0 | 111.3137 | 95.46614761 | 23022.22279 | 37.08802885 | 65.376 | 2039.94285 | 4 224.48 | | |
| ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| Net Yield | 2864.888939 | 158.8492479 | 7348.118948 | 2.911368329 | 13.81905324 | 2307.920979 | 4.167646 | 0 | 100.5611 | 86.39303185 | 20829.29865 | 33.55405637 | 59.108 | 1844.18745 | 1 202.75 | Final Load | 35856.5307 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.70 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48.3 | 3 7.7 840.4 | 4 | |
| 280 ft | 43.3 | 1.4 | 158.8 | 0.1 | 0 | 9.8 | 0.1 | 0 | | | | | 0.6 | 20. | 6 4.3 294.6 | 3 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | 637.1430271 | 0.260590195 | 2.866492147 | 317.6594479 | 0.26059 | 0 | 6.775345 | 0.260590195 | 836.2339362 | 0.781770585 | 2.3453 | 125.865064 | 3 20.065 | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 4 | . 4 | 1 4 | | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 6 3.6 | | |
| Concentration/Export Coefficient Season 2 | | | | | | | ١, | | | | | | | l . | | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0. | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 1143.061348 | | | | | | | | 35.32436 | 1 358629294 | 4359.841403 | 4.075887881 | 12 228 | 656.217948 | B 104.61 | | |
| Load Season 2 ** | 796.2825554 | | | | | 180.2209941 | | | 34.9408 | | 985.6984981 | | | 378.831885 | | Total Load | 16502.0699 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -193.9343903 | -6.56051384 | -606.4055853 | -0.312477303 | -1.414361623 | -174.7590829 | -0.31248 | 0 | 70.26517 | 1.358629294 | 5345.539901 | 5.914877616 | 23.262 | 1035.04983 | 4 183.69 | | |
| Net Yield | 1745.409513 | 59.04462456 | 5457.650267 | 2.812295726 | 12.72925461 | 1572.831746 | 2.812296 | 0 | 63.42805 | 1.230050964 | 4834.362193 | 5.345243655 | 21.001 | 935.063312 | 7 165.88 | Final Load % Net | 14879.6026 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.8 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | | | | | 687 | | | | | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 | 1.3721491 | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 4 | 4 | 4 | -0.1 | 4 | 4 | 1 4 | 4 | 3.6 | | | | | 3. | | + + | |
| Wetland Function Factor Load | -0.1 23425.40552 | | | | | -0.1 23256.14681 | | | | 22728 18578 | 1856430.588 | | | 137036.448 | 1 1 1 | Total Load | 2637701.63 |
| Wetland Function Value | -23425.40552 | | | | | | | | | | 1856430.588 | | | 137036.448 | | rotal Lodu | 203//01.03 |
| Net Yield | 21082.86497 | | | | | | | | | | 1678447.607 | | | 123898.248 | | Final Load | 2383550.20 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.6 |
| 1 | | | | | | | | | | | | | | | | | |
| Scenario 5 - Moderate High | | | 1 | | 5 2.2 | 592.2 | 1.6 | | 82.8 | 224.8 | 11450.7 | . 6 | 72.4 | 836. | 7 101.8 17293.3 | 3 | |
| Flow (exisiting conditions) | 406.1 | 80.1 | 33/15 | | | | | | | | | | | | | -1 | |
| Flow (exisiting conditions) 290 and below | 496.1 1299 683143 | 80.3 | | | | 1551 445004 | 4 191681 | Λ. | 216 9195 | 588 Q3120/A6 | | 15 71880/30 | 189 67 | 2101 08727 | 3 266 7 | | |
| Flow (exisiting conditions) 290 and below Volume = 45305 | 496.1 1299.683143 4 | | | | | 1551.445994 4 | | 0 | 216.9195 | | | | | 2191.98727 | | | |
| Flow (exisiting conditions) 290 and below Volume = 45305 Concentration | 1299.683143 4 | 210.3699988 | 8763.233449 4 4 | 1.309900366 | 5.763561611 | 4 | . 4 | 4 | 3.6 | | | | | | | | |
| Flow (exisiting conditions) 290 and below Volume = 45305 | | 210.3699988 | 8 8763.233449 4 4 1 -0.1 | 1.309900366 | 5.763561611 4 -0.1 | -0.1 | -0.1 | -0.1 | 3.6 | 3.6 | | 3.6 | 3.6 | | 6 3.6 1 1 | Total Load | 240685.942 |
| Flow (exisiting conditions) 290 and below Volume = 45305 Concentration Wetland Function Factor | 1299.683143 4 -0.1 | 210.3699988 -0.1037.990818 | 8 8763.233449 4 4 6 -0.1 3 43238.84542 | 1.309900366 -0.1 2 6.463205594 | 5.763561611 4 -0.1 4 28.43810461 | -0.1 7655.020706 | -0.1 20.68226 | -0.1 0 0 | 3.6 1 1190.94 1190.94 | 3.6 1 3233.372851 3233.372851 | 3.6 | 3.6 1 86.29998713 | 3.6 1 1041.4 | 3.0 | 6 3.6 1 1 1 1464.2 | Total Load | 240685.942 |
| Flow (exisiting conditions) 290 and below Volume = 45305 Concentration Wetland Function Factor Load | 1299.683143 4 -0.1 6412.79259 | 210.3699988 -0.1037.990818 | 8 8763.233449 4 -0.1 8 43238.84542 3 -4323.884542 | 1.309900366 -0 6.463205594 -0.646320559 | 5 5.763561611 4 -0.1 28.43810461 -2.843810461 | -0.1 7655.020706 -765.5020706 | -0.1 20.68226 -2.06823 | -0.1 0 0 | 3.6 1 1190.94 | 3.6 1 3233.372851 3233.372851 | 3.6 1 164699.2104 | 3.6 1 86.29998713 86.29998713 | 3.6 1 3 1041.4 3 1041.4 | 12034.5332 | 6 3.6 1 1 1 1464.2 1 1464.2 | Total Load Final Load % Net | 240685.942 219796.393 |

Table C13. Low Watershed Functions for Organic Carbon - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario B - Organio | Carbon | | | | | | | | | | | | | | |
|---|-----------------------------|-------------------------------|--------------|--------------|--------------|----------------------------|-------------|------------|----------------------|----------------------------|----------------------------|------------------|----------|--------------------------|-------------------|---------------------|---------------|
| | | Scrub/shrub marsh 19 | | Riparian 43 | River 45 | Open water 24 | March 20 | Sandhar 31 | Cotton 36 | Cotton/soybeans 37 | Southeane 38 | Southeane/com 30 | Com 40 | Herb Veg 41 | Pacture I C Total | | |
| Scenario 1 - Existing | Cypress/Tupelo 10 | SCIUD/SHIUD HIAISH 19 | DEN 42 | Ripanan 43 | River 43 | Open water 24 | IVIAISII 29 | Sandbar Si | COLLOIT 36 | Collon/soybeans 37 | Suyueans 36 | Soybeans/com 39 | COIII 40 | neib. veg. 41 | rastule LC Total | | |
| Conditions (No Flood) 275 ft | 6.7 | , | 42 | 0.1 | 0 | 0.9 | |) (| 0.8 | 0 | 18 | | 0.1 | 2.5 | 9 1.7 73. | 1 | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 15.3926128 | | | |
| Concentration/Export Coefficient | 4 | 4 | | | 4 | | | | | 3.6 | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | 1 | 1 | 1 | 1 1 | | 1 1 | | |
| Load | 175.4683769 | (| | | | | (| | 22.11698 | | 497.6321398 | | | 80.1740669 | | Total Load | 1951.29511 |
| Wetland Function Value | -17.54683769 | | | | | | | | 22.11698 | | 497.6321398 | | | 80.1740669 | | | |
| Net Yield WATERSHED FUNCTION | 157.9215392 | 2 (| 989.9559175 | 2.357037899 | 0 | 21.21334109 |) (| 0 | 20.02184 | 0 | 450.4913818 | | 2.5027 | 72.5791670 | 6 42.546 | % Net | 1759.58936 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | Removal | 9.8 |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 2 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 1 3.7 | 113. | 1 9.9 2370. | 8 | |
| 280 ft | 43.3 | 1.4 | 158.8 | 0.1 | | | 0.1 | | | 0 | | 0.1 | 0.6 | 20.0 | 6 4.3 294. | 6 | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | | | | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 Concentration/Export Coefficient | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 9 0 | 7.081466 | | 199.7718941 | | | 76.7780040 | | | |
| Season 1 | 4 | 4 | 1 4 | 4 | 4 | 4 | 4 | 1 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 6 3.6 | | |
| Concentration/Export Coefficient Season 2 | 4 | | 1 4 | | 4 | 4 | . 4 | 4 4 | 0 | 0 | C |) (|) (|) (| 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | 1 100.000 | 1 20100 50 | 1 00 0070 | 1 1 | 1710 105 | 1 1 | | |
| Load Season 1 * Load Season 2 ** | 2386.927377 796.2825554 | 150.753308 | | | | 2384.135649 180.2209941 | | | 80.16091 | | 23129.50567 985.6984981 | | | 1743.49979 378.831885 | | Total Load | 40903,2995 |
| Wetland Function Value (Both Seasons) | -318.3209932 | 25.74585625 | | | | | | | 115.1017 | | 24115.20417 | | | | | Total Load | 40903.2995 |
| * Export Coefficients were NOT reduced by 50% for upland and ag land covers | -318.3209932 | -17.0499104 | -610.4570008 | -0.32348531 | -1.53545036 | -230.4330043 | -0.46307 | | 115.1017 | 100.2011376 | 24115.20417 | 36.63033265 | 0 60.072 | 2122.3316 | 5 231.09 | | |
| ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 2864.888939 | 158.8492479 | 7348.118948 | 2.911368329 | 13.81905324 | 2307.920979 | 4.167646 | 6 0 | 104.3491 | 91.12802185 | 21922.28003 | 35.30236037 | 61.803 | 1926.57627 | 7 209.96 | Final Load % Net | 37052.0793 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.42 |
| Scenario 3 - Avoid and Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | | | | | | 2.6 | | | | | | | | |
| 280 ft | 43.3 231.6646835 | | | | | | | | | | | | | | | Б | |
| Volume Season 1 = 2190 Volume Season 2 = 1098 | 161.3828921 | 8.07829605 5.217922607 | | | | 317.6594479 36.52545825 | | | 6.775345 7.081466 | 0.260590195 | 836.2339362 199.7718941 | 0.781770585 | | 125.865064 | | | |
| Concentration/Export Coefficient Season 1 | 101.3020921 | 5.217922001 | 591.8615071 | 0.372706756 | . 0 | 30.52545625 | 0.372708 | , , | | 3.6 | | | | | | | |
| Concentration/Export Coefficient | 4 | | 4 | | . 4 | 4 | | . 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | |
| Season 2 Wetland Function Factor | -0.1 | -0.1 | 1 -0.1 | -0. | -0.1 | -0.1 | -0.1 | -0.1 | - 0 | 0 | | |) (| , | 0 0 | | |
| Load Season 1 * | 1143.061348 | | | | | | | | 37.21836 | 1 421475204 | 4593.604217 | 4.294425881 | 1 12 002 | 691.402566 | B 110.22 | | |
| Load Season 2 ** | 796.2825554 | | | | | 180.2209941 | | | 34.9408 | | 985.6984981 | | | 378.831885 | | Total Load | 16779.4674 |
| Wetland Function Value (Both | 730.2023334 | 23.74303023 | 2020.0101 | 1.000000730 | , , | 100.2203341 | 1.00000 | , | 34.3400 | | 303.0304301 | 1.030303730 | 11.05 | 370.031003 | 3 73.077 | Total Load | 10//3.40/4 |
| Seasons) | -193 9343903 | -6.56051384 | -606.4055853 | -0.312477303 | -1.414361623 | -174 7590829 | -0.31248 | 3 0 | 72.15916 | 1.431475294 | 5579.302715 | 6.133415616 | 23.917 | 1070.23445 | 2 189.3 | | |
| Net Yield | 1745.409513 | 59.04462456 | 5457.650267 | | | 1572.831746 | 2.812296 | 6 0 | 65.32205 | | 5068.125007 | | | 970.247930 | | Final Load % Net | 15157.0002 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.6 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | | | | | | | | | | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 | 1.3721491 | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | | | | | 3.0 | | | |
| Wetland Function Factor Load | -0.1 23425.40552 | | | | | | | | | 22720 40570 | 1856430.588 | | | 137036.448 | 1 1 1 | Total Load | 2637701.63 |
| Wetland Function Value | 23425.40552 -2342.540552 | | | | | | | | | | 1856430.588 | | | 137036.448 | | TOTAL LOAD | ∠03//01.63 |
| Net Yield | 21082.86497 | | | | | | | | | | 1678447.607 | | | 123898.248 | | Final Load | 2383550.20 |
| WATERSHED FUNCTION | 2.002.00437 | 11102.01730 | | 10.2002039 | .54.0520907 | 20000.00213 | 2000.030 | 0.0000100 | 02.0.119 | 23040.14910 | .0.0141.007 | 2.30.033700 | | .2000.240 | 10010 | % Net Removal | 9.6 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | |
| Flow (exisiting conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | | | | | | | 82.8 | 224.8 | | | | | | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | 8763.233449 | 1.309900366 | 5.763561611 | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | | |
| Concentration | 4 | 4 | 4 | 4 | 4 | 4 | | | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | | | | | | | 1 2000 0000 | 1 404000 0:- | 1 00 0000 | 1 1 | 1000155 | 1 1 | T | 0.40008 - : - |
| Load Value Value | 6412.79259 | | | | | | | | 1190.94 | | 164699.2104 | | | 12034.5332 | | Total Load | 240685.942 |
| Wetland Function Value Net Yield | -641.279259 5771.513331 | 9 -103.7990818 934.1917366 | | | | | | B 0 | 1190.94 1083.909 | 3233.372851 2942.787128 | 164699.2104 149897.5648 | | | 12034.5332 | | Final Load | 219796.393 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 8.6 |

Table C14. Low (no runoff reduction) Wateshed Functions for Organic Carbon - New Madrid Floodway.

| Contour Range | Cynress/Tunelo 16 | Scrub/shrub marsh 19 Bl | H 42 | Riparian 43 | River 45 | Onen water 24 | Marsh 20 | Sandhar 31 | Cotton 36 | Cotton/soybeans 37 | Sovheans 38 | Sovheans/core 30 | Com 40 | Herb Veg 41 | Pasture | LC Total | | |
|---|----------------------------|-----------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|-------------|------------|--------------------|---|---|----------|---------------|---------|----------|-------------------|----------|
| cenario 1 - Existing | Cypress/Tupero 16 | SCIUD/SIIIUD IIIaisii 19 Bi | LF1 42 | Nipaliali 43 | Kivei 45 | Open water 24 | IVIAISII 29 | Saliubai 31 | COLLOIT 30 | Cotton/Soybeans 37 | Suybearis 30 | Soybeans/com 39 | COIII 40 | neib. veg. 41 | Fasiule | LC Total | | |
| onditions (No Flood) | | | | | | | | | | | | | | | | | | |
| 75 ft | 6.7 | 0 | 42 | | 0 | | | | | 0 | 18 | | | 2.9 | 1.7 | 73.1 | | |
| olume = 388 | 35.5622435 | 0 | 222.9274966 | | | 4.777017784 | | | 4.246238 | | 95.54035568 | | | 15.39261286 | | | | |
| Concentration/Export Coefficient | 4 | 4 | 4 | 1 | 4 | | 4 | | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | | | |
| Vetland Function Factor | 0.8 | 0.8 | 0.8 | | | | | | | | 1 | | 1 | | | | | |
| .oad | 175.4683769 | 0 | 1099.951019 | 2.618930999 | 0 | 23.57037899 | 0 | 0 | 22.11698 | 0 | 497.6321398 | 0 | 2.7646 | 80.17406696 | 46.999 | | Total Load | 1951.295 |
| Vetland Function Value | 140.3747015 | 0 | 879.9608155 | -1.309465499 | 0 | -4.714075798 | C | 0 | 22.11698 | 0 | 497.6321398 | 0 | 2.7646 | 80.17406696 | 46.999 | | | |
| let Yield | 140.3747015 | 0 | 879.9608155 | 1.309465499 | 0 | 18.85630319 | 0 | 0 | 20.02184 | 0 | 450.4913818 | 0 | 2.5027 | 72.57916706 | 42.546 | | Final Load | 1628.642 |
| NATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 16 |
| cenario 2 - Authorized Project 2 seasons) | | | | | | | | | | | | | | | | | | |
| 85 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 113.1 | 99 | 2370.8 | | |
| BO ft | 43.3 | 1.4 | 158.8 | 0.1 | | | | | | | 53.6 | | 0.6 | | | | | |
| olume Season 1 = 6707 | 483.7594905 | 30.55323098 | 1062.856378 | | | | | | 14.71081 | | | | | 319.9602244 | | | | |
| olume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | | | | | 7.081466 | | 199.7718941 | 0.372708758 | | 76.77800407 | | | | |
| oncentration/Export Coefficient | 101.0020021 | 0.E.1.0EE007 | 001.0010071 | 0.0.2.00730 | | 30.020.0020 | 2.012.00 | 1 | | | | 0.072700700 | 000 | | 10.020 | | | |
| eason 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | | | |
| Concentration/Export Coefficient leason 2 | | | - | | | | | | _ | | _ | | _ | | _ | | ı | |
| eason 2 / etland Function Factor | 8 | 0.8 | 0.8 | -0.5 | 8 | 8 | 0.0 | -0.2 | 1 | 0 | - 0 | 0 | - 0 | - | 0 | | $\overline{}$ | |
| oad Season 1 * | 2386.927377 | 150.753308 | 5244.26091 | 1.395863963 | | -0.2 2384.135649 | | | 76.37292 | | 22026 52420 | 25 24002042 | E4 242 | 1661.110968 | 1 145.4 | | $\overline{}$ | |
| oad Season 1 * oad Season 2 ** | 1592.565111 | 51.49171259 | 5244.26091 | | | 360.4419881 | | | 69.88161 | | 1971.396996 | | | 757.6637709 | | | Total Load | 45125.4 |
| | 1092.005111 | 51.49171259 | 5640.631399 | 3.07797947 | 0 | 300.44 19881 | 3.011979 | 0 | 101 00.60 | 0 | 19/1.390996 | 3.0119/94/ | 22.068 | 151.003//0 | 156.15 | | LOISI FORG | 45125.4 |
| Vetland Function Value (Both Seasons) | 3183,59399 | 161.7960165 | 8867.913847 | -2.536921717 | 1 52545000 | -548.9155275 | E 175700 | | 146.2545 | 95.46614761 | 24007 02420 | 38.92701859 | 76.44 | 2418.774739 | 303.56 | | | |
| Export Coefficients were educed by 50% for upland and ig land covers * No Export for upland and ag | 3163.39399 | 161.7900105 | 8807.913847 | *2.330921717 | *1.33343036 | -546.9155275 | 3.173760 | 0 | 140.2343 | 95.40014701 | 24007.92120 | 38.92701639 | 70.41 | 2410.77473 | 303.30 | | | |
| Ind covers let Yield | 3183.59399 | 161.7960165 | 8867.913847 | 2.536921717 | 13.81905324 | 2195.66211 | 5 175766 | . 0 | 132.0079 | 86.39303185 | 21716 42729 | 35 20914713 | 69 039 | 2185.136148 | 273.92 | | Final Load | 38928. |
| ATERSHED FUNCTION | 0100.00000 | 101.7000100 | 3001.010041 | 2.000021111 | 10.01000021 | 2100.00211 | 0.110100 | | 102.0010 | 00.00000100 | 21110.12120 | 50.20014110 | 00.000 | 2100.10014 | 270.02 | | % Net Removal | 1 |
| cenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | 1 | |
| 182 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48.3 | 7.7 | 840.4 | | |
| 180 ft | 43.3 | 1.4 | 158.8 | | | | | | | | 53.6 | | | | | | | |
| olume Season 1 = 2190 | 231.6646835 | 8.07829605 | 637.1430271 | | | 317.6594479 | | | 6.775345 | | | | | 125.8650643 | | | | |
| olume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | | | | | 7.081466 | | 199.7718941 | | | 76.77800407 | | | | |
| oncentration/Export Coefficient eason 1 | 101.3626921 | 5.217922007 | 391.8613071 | 0.372708736 | 4 | 30.32343623 | 0.372708 | 4 | 3.6 | | 3.6 | 3.6 | 3.6 | 3.6 | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| eason 2 | 8 | 8 | 8 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | (| 0 | | \longrightarrow | |
| Vetland Function Factor | 0.8 | 0.8 | 0.8 | | | | | | | | 1 | 1 | 1 | | 1 | | | |
| oad Season 1 * | 1143.061348 | 39.8592821 | 3143.740153 | | | | | | 35.32436 | | | | | 656.2179488 | | | | |
| oad Season 2 ** | 1592.565111 | 51.49171259 | 5840.631399 | 3.67797947 | 0 | 360.4419881 | 3.677979 | 0 | 69.88161 | 0 | 1971.396996 | 3.67797947 | 22.068 | 757.6637709 | 158.15 | | Total Load | 21919.73 |
| Vetland Function Value (Both | | | | | | | | | | | | | | | | | 1 | |
| easons) | 2188.501167 | 73.08079575 | 7187.497242 | | | -385.5623646 | | 0 | 105.206 | | 6331.2384 | | | | | | | |
| let Yield | 2188.501167 | 73.08079575 | 7187.497242 | 2.481881382 | 12.72925461 | 1542.249458 | 3.97101 | 0 | 94.87477 | 1.230050964 | 5721.490841 | 7.000334416 | 30.932 | 1276.01201 | 237.05 | | Final Load | 18379. |
| VATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 1 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | | |
| existing conditions) | 692 | 364.4 | 70010 | 0.5 | 4.4 | 687 | 87.1 | | 288.6 | 643.7 | 52577.2 | 77.0 | 8211.8 | 3881.1 | 2407 | 75077.7 | | |
| 00 and below | | | 7221.2 | | | | | | | | | | | | | /50//.7 | | |
| olume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | | | 597.5709 | | | 4416.261943 | | 534.4520823 | 56339 | | | \vdash | | |
| Concentration | 4 | 4 | 4 | 4 | | | 4 | 4 | | | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | | | |
| Vetland Function Factor | 0.8 | 0.8 | 0.8 | | | | | | | | 1 | 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 1 | 407000 : : - | 1 10000 | | | 000= |
| oad | 23425.40552 | 12335.57482 | 244450.1999 | | | | | | | | | | | 137036.4484 | | | Total Load | 2637701 |
| Vetland Function Value | 18740.32442 18740.32442 | 9868.459852 9868.459852 | 195560.16 195560.16 | -8.462935521 8.462935521 | -14.89476652 134.0528987 | -4651.229362 18604.91745 | | | | | | | | 137036.4484 | | | Final Load | 2352901 |
| | 18740.32442 | 9868.459852 | 195560.16 | 8.462935521 | 134.0528987 | 18604.91745 | 2358.789 | 5.4162787 | 9213.119 | 20549.14915 | 16/844/.60/ | 2486.839706 | 262149 | 123898.2488 | 10876 | | % Net | |
| /ATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 1 |
| | | | | | | | | | | | | | | 1 | | | 1 | |
| low (existing conditions) | 496.1 | 00.0 | 0015 | | | F00.0 | 1.6 | | 00.0 | 0010 | 11450.7 | _ | 70 1 | 000 | 404.0 | 47000 0 | | |
| 90 and below | | 80.3 | 3345 | 0.5 | | | | | | | | 6 | | | | 17293.3 | | |
| olume = 45305 | 1299.683143 | 210.3699988 | 8763.233449 | 1.309900366 | 5.763561611 | 1551.445994 | 4.191681 | | 216.9195 | | | | | 2191.987273 | | | | |
| oncentration | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | 3.6 | | 3.6 | 3.6 | | | | |
| etland Function Factor | 0.8 | 0.8 | 0.8 | | | | | | | | 1 | 1 | 1 | | 1 | | \longrightarrow | |
| oad | 6412.79259 | 1037.990818 | 43238.84542 | | | | | | | | | | | 12034.53321 | | | Total Load | 240685 |
| etland Function Value | 5130.234072 | 830.3926547 | 34591.07634 | -3.231602797 | -2.843810461 | -1531.004141 | 16.54581 | 0 | 1190.94 | 3233.372851 | 164699.2104 | 86.29998713 | 1041.4 | 12034.5332 | 1464.2 | | | |
| | | | | | | | | | | | | | | | | | | |
| et Yield | 5130.234072 | 830.3926547 | 34591.07634 | 3.231602797 | 25.59429415 | 6124.016564 | 16.54581 | 0 | 1083.909 | 2942.787128 | 149897.5648 | 78.54414042 | | 10952.98038 | | | Final Load | 213957 |

Table C15. Expected (concentration doubled) Watershed Functions for Organic Carbon - New Madrid Floodway.

| New Madrid Floodway - Ex | pected Concen | trations. Runoff Co | pefficients, and Fu | nction Factors - Se | ediments | | | | | | | | | | | |
|---|-----------------------------|----------------------------|----------------------------|---------------------|---------------|----------------------------|--------------------|-------------|--------------------|----------------------------|----------------------------|-----------|----------------------------|------------------|--------------------------------|----------------------|
| • | • | | | | | | | | | 0 1 00 | 0 1 / 00 | 0 40 | | | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 Sandbar 3 | 1 Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | al | |
| Conditions (No Flood) 275 ft | 6.7 | | 42 | 0.1 | 0 | 0.9 | | 0 0.1 | 8 0 | 18 | , | 0.1 | 2.9 | 1.7 73 | | |
| Volume = 388 | 35.5622435 | | | | | | | 0 4.246238 | | 95.54035568 | | | 15.39261286 | | .1 | |
| Concentration/Export Coefficient | 150 | | | | | | | 50 130 | | | 130 | | | | | |
| Wetland Function Factor | -0.8 | -0.8 | -0.8 | -0.5 | -0.1 | -0.2 | | .2 | 1 1 | 1 | 1 | 1 1 | 1 | 1 | | |
| Load | 6580.064134 | | | | | | | 0 827.768 | | 18624.78224 | | | 3000.659361 | | Total Load | 73126.0144 |
| Wetland Function Value | -5264.051307 | 0 | | | | | | 0 827.768 | | 18624.78224 | | | 3000.659361 | | | |
| Net Yield WATERSHED FUNCTION | 1316.012827 | 0 | 8249.632646 | 49.10495622 | 2 0 | 707.1113696 | 6 0 | 0 749.2002 | 2 0 | 16857.00382 | (| 93.650021 | 2715.850615 | 1592.1 | Final Load % Net Removal | 32329.61678 55.79 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | |
| 285 ft | 171 | | | | | | | 0 5.2 | | | | | | | | |
| 280 ft | 43.3 | | | | | 9.8 | | 0 1.9 | | | 0.1 | | | | .6 | |
| Volume Season 1 = 6707 Volume Season 2 = 1098 | 483.7594905 161.3828921 | 30.55323098 5.217922607 | 1062.856378 591.8615071 | 0.282900287 | | 483.1936899 36.52545825 | | 0 14.7108 | | 4244.635903 199.7718941 | 0.372708758 | | 319.9602244 76.77800407 | | | |
| Concentration/Export Coefficient | 101.3020921 | 5.217922007 | 591.0015071 | 0.3/2/06/56 | 0 | 36.52545625 | 0.372709 | 0 7.061400 | 0 | 199.7710941 | 0.372706756 | 2.2302525 | 76.77800407 | 16.026 | | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 15 | 50 130 | 0 130 | 130 | 130 | 130 | 130 | 130 | | |
| Concentration/Export Coefficient Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 26 | 30 | 0 | _ | | , | , | | | |
| Wetland Function Factor | -0.8 | | | | | | | | 1 1 | 1 | - | 1 | 1 | 1 | | |
| Load Season 1 * | 89509.77664 | | 196659.7841 | | | | | 0 2858.723 | 3 3573.40416 | 824851.6311 | 1319.410767 | 2034.0916 | 62177.23239 | 5442.6 | | |
| Load Season 2 ** | 51758.3661 | | 189820.5205 | | | | | 0 2271.152 | | 64070.40238 | | | 24624.07255 | | Total Load | 1636365.932 |
| Wetland Function Value (Both Seasons) | -113014.5142 | -5861.383768 | -309184.2437 | -85.93961571 | -57.57938848 | -20223.89029 | 470.070 | 0 5129.876 | 0570 10110 | 888922.0335 | 4 400 045 | 0754 007 | 86801.30494 | 10583 | | |
| * Export Coefficients were reduced by 50% for upland and aq land covers | -113014.5142 | -5861.383768 | -309184.2437 | -85.93961571 | -57.57938848 | -20223.89025 | 9 -179.379 | 0 5129.876 | 5 3573.40416 | 888922.0335 | 1438.9451 | 2/51.29/6 | 86801.30494 | 10583 | | |
| ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | |
| Net Yield | 28253.62855 | 1465.345942 | 77296.06092 | 85.93961571 | 518.2144963 | 80895.56117 | 44.84483 | 0 4630.567 | 7 3233.162319 | 803976.7074 | 1301.36391 | 2485.9009 | 78418.68966 | 9550.3 | Final Load | 1092156.32 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | % Net Removal | 33.26 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | | | | | | | 0 2.0 | | | 0.3 | | | | | |
| 280 ft Volume Season 1 = 2190 | 43.3 231.6646835 | | | | | 9.8 317.6594479 | | 0 1.9 | 0.360600406 | 53.6 836.2339362 | 0.1 | | 20.6 125.8650643 | | .0 | |
| Volume Season 2 = 1098 | 161.3828921 | | 591.8615071 | | 3 2.000432147 | | 0.20033 | 0 7.081466 | 6 0.200330133 | 199.7718941 | 0.372708758 | | | | | |
| Concentration/Export Coefficient | 101.0020021 | O.ETTOEEGOT | 001.0010011 | 0.072700700 | , | 00.02010020 | 0.072700 | 0 1.00140 | | 100.7710011 | 0.072700700 | Z.EGOLOLO | 70.77000101 | 10.020 | | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 15 | 50 130 | 0 130 | 130 | 130 | 130 | 130 | 130 | | |
| Concentration/Export Coefficient | | | | | | | | | | _ | | | | | | |
| Season 2 Wetland Function Factor | 260 | | | | | -0.2 | | | 0 0 | 0 | |) (| | 0 | | |
| Load Season 1 * | 42864.80055 | | | | | | | 0 1322.033 | 1 En 047400E4 | 163169.3821 | 152 5422705 | 457 60604 | 24559.30556 | 2015 2 | | |
| Load Season 2 ** | 51758.3661 | | 189820.5205 | | | 11714.36461 | | 0 2271.152 | | 64070.40238 | 119.5343328 | | 24559.30556 | | Total Load | 767428.1007 |
| Wetland Function Value (Both | 31730.3001 | 107 3.400033 | 103020.3200 | 113.3343320 | , | 11714.30401 | 113.3343 | 0 22/1.102 | - 0 | 04070.40230 | 113.5545520 | 717.200 | 24024.07250 | 3140 | Total Load | 707420.1007 |
| Seasons) | -75698.53332 | -2534.56299 | -246168.621 | -83.87560315 | -53.03856086 | -14098.14669 | -134.201 | 0 3593.185 | 50.84742351 | 227239.7844 | 272.0766033 | 1174.8328 | 49183.37811 | 9055.2 | | |
| Net Yield | 18924.63333 | 633.6407476 | 61542.15524 | 83.87560315 | 477.3470478 | 56392.58674 | 33.55024 | 0 3240.706 | 6 46.02573616 | 205359.9495 | 245.658108 | 1059.717 | 44392.09587 | 8170 | Final Load % Net | 400601.9018 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | Removal | 47.80 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | |
| 300 and below | 692 | | | | | | | .2 288.0 | | | | 8211.8 | 3881.1 | 340.7 75077 | .7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | 49542.81613 | 3.4303728 | 30.18728064 | 4713.332228 | 597.5709 1.372149 | 91 1980.01 | 1 4416.261943 | 360718.7936 | 534.4520823 | 56339.071 | 26627.23975 | 2337.5 | | |
| Concentration | 260 | | | | | 260 | | | | | | 130 | | | | |
| Wetland Function Factor | -0.8 | | | | | | | | 1 1 | | | 1 105 | 1 | | | 400 |
| Load | 1522651.359 | | | | | | | 650208.4 | | | | | 8744018.305 | | Total Load | 168671861.8 |
| Wetland Function Value Net Yield | -1218121.087 304530.2718 | | -12711410.4 3177852.599 | | | | 38330.33 352.058 | 29 650208.4 | | 118455077 106886183.2 | 175506.6929 158365.8633 | | 8744018.305 7890035.33 | | Final Load | 139116604.8 |
| WATERSHED FUNCTION | 304330.27 10 | 100302.4720 | 3177632.398 | 330.0900008 | 0713.430412 | 1209319.03 | 36330.33 332.006 | 12 300703. | 1300002.134 | 100000103.2 | 136363.663 | 10094000 | 7690033.33 | 092022 | % Net Removal | 17.52 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | 77.02 |
| Flow (existing conditions) | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | | | | | | | 0 82.8 | | | | 72.4 | | | 1.3 | |
| Volume = 45305 | 1299.683143 | | | | | | | 0 216.9195 | | 29998.55224 | | | 2191.987273 | | | |
| Concentration | 260 | 260 | 260 | | | | | 50 130 | 0 130 | 130 | 130 | 130 | 130 | | | |
| Wetland Function Factor | -0.8 | | | | | | | .2 . | 1 1 | 1 | 1 | 1 | 1 | | | |
| Load | 416831.5184 | | | | | | | 0 73926.14 | | 10223502.46 | | | 747028.9594 | | Total Load | 15111178.0 |
| M 4 15 6 M 1 | | | | | | | | | | | | | | | | |
| Wetland Function Value | -333465.2147 | | | | | -99515.26917 | | 0 73926.14 | | 10223502.46 | | | | | Final ! ! | 11201007 0 |
| Wetland Function Value Net Yield | -333465.2147 83366.30368 | | 562104.9905 | | | 398061.0767 | | 0 66969.14 | | 9261395.488 | | | 676728.0258 | | Final Load | 11391827.91 |

Table C16. Expected Watershed Functions for Sediment - New Madrid Floodway.

| New Madrid Floodway - Hig | ah Retention Sc | enario - Sediment | s | 1 | 1 | | | | | | | | | | | | |
|---|---|---|---|--|---|--|---|---|--|---|---|---|---|---|--|---------------------------------------|--------------------|
| | | | | D: : 40 | D: 45 | | | 0 " 04 | 0 " 00 | 0 / 1 07 | 0 1 00 | 0 1 / 00 | 0 10 | | | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | marsn 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 4 | Pasture LC Total | | |
| Conditions (No Flood) 275 ft | 6.7 | |) 42 | 2 0.1 | 0 | 0.9 | 0 | | 0.8 | | 18 | 3 0 | 0.1 | | 9 1.7 73. | | |
| Volume = 388 | 35.5622435 | | | | | | | | 4.246238 | | 95.54035568 | | | 3 15.3926128 | | 1 | |
| Concentration/Export Coefficient | 150 | 150 | | | | | | | | | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 2 0 | 2 0.2 | | |
| Load | 6580.064134 | (| 41248.16323 | 98.20991245 | | | | 0 | 827.7681 | 0 | 18624.78224 | 1 0 | 103.47 | 3000.65936 | 1 1759 | Total Load | 73126.0144 |
| Wetland Function Value | -5922.057721 | (| | | | | | | 165.5536 | | 3724.956448 | | | 600.131872 | | | |
| Net Yield WATERSHED FUNCTION | 658.0064134 | (| 4124.816323 | 9.820991245 | 0 | 88.3889212 | 0 | 0 | 149.84 | 0 | 3371.400763 | 3 0 | 18.73 | 543.17012 | 3 318.41 | % Net Removal | 9282.58364 87.3 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | | | | | | | | | | | | | | | | |
| 280 ft Volume Season 1 = 6707 | 43.3 483.7594905 | 30.55323098 | | | | | | | 1.9 | | 53.6 4244.635903 | | | 5 20 7 319.960224 | | 0 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | | | | | | 7.081466 | | 199.7718941 | | | 319.90022 | | | |
| Concentration/Export Coefficient Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | | | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 260 | 260 | | | | 260 | | 260 | | 0 | 0 | 0 |) (|) | 0 0 | | |
| Wetland Function Factor | -0.9 | | | | | | | | | | | | | | | | |
| Load Season 1 * Load Season 2 ** | 89509.77664 51758.3661 | 5653.249051 1673.480659 | | | | | | | 2858.723 | | 824851.6311 64070.40238 | | | 1 62177.2323 | | Total Load | 1636365.93 |
| Wetland Function Value (Both | | 107 3.40003 | | | | | | | 2211.132 | | | | , , , , , , , , , , , , , | 24024.0120 | 5 5170 | . Stail Load | 1000000.932 |
| Seasons) | -127141.3285 | -6594.056739 | -347832.2741 | -154.6913083 | -518.2144963 | -91007.50631 | -201.802 | 0 | 1025.975 | 714.6808321 | 177784.4067 | 287.7890199 | 550.26 | 17360.2609 | 9 2116.5 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 14126.81427 | 732.672971 | 38648.03046 | 17.18792314 | 57.57938848 | 10111.94515 | 22.42241 | 0 | 926.1134 | 646.6324639 | 160795.3415 | 260.2727819 | 497.18 | 15683.7379 | 3 1910.1 | Final Load | 244435.9975 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 85.06 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | 244.5 | 0.1 | 1.1 | 121.9 | 0.1 | 0 | 2.6 | 0.1 | 320.9 | 0.3 | 0.9 | 48 | 3 7.7 840. | 4 | |
| 280 ft | 43.3 | | | | | | | | 1.9 | | | | | | | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | 0.260590195 | 836.2339362 | 0.781770585 | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Concentration/Export Coefficient | 150 | 100 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 1 130 |) 13 | 0 130 | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 0 | | 0 | 0 | |) | 0 0 | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | | | | | 0.2 | 0.2 | 0.2 | 0.2 | 2 0 | 2 0.2 | | |
| Load Season 1 * | 42864.80055 | 1494.723079 | | 48.21687351 | 530.3856086 | 58776.36881 | 48.21687 | | 1322.033 | | 163169.3821 | 152.5422705 | 457.63 | 3 24559.3055 | 6 3915.3 | | |
| Load Season 2 ** | 51758.3661 | 1673.480659 | 189820.5205 | 119.5343328 | 0 | 11714.36461 | 119.5343 | 0 | 2271.152 | . 0 | 64070.40238 | 119.5343328 | 717.21 | 24624.0725 | 5 5140 | Total Load | 767428.1007 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -85160.84999 | -2851.383364 | | | | | | | 718.6371 | | 45447.95689 | | | 9836.67562 | | Final Load | 100100 000 |
| Net Yield WATERSHED FUNCTION | 9462.316665 | 316.8203738 | 30771.07762 | 16.77512063 | 53.03856086 | 7049.073343 | 16.77512 | 0 | 648.1412 | 9.205147232 | 41071.9899 | 49.1316216 | 211.94 | 8878.41917 | 3 1634 | % Net Removal | 100188.6994 |
| | | | | | | | | | | | | | | | | Itellioval | 00.3- |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 | | | | | | | | | | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | | | | | | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration Wetland Function Factor | 260 | 260 | | | | -0.9 | | | | | | | | | | + + | |
| Load | | | | | | | | 440.07265 | | | | | | | | T | 168671861. |
| | | | 15889263 | 1100,181618 | | | | | | | | | | | | | |
| | 1522651.359 | 801812.363 | | | | | | -396.06538 | 130041.7 | 290047.9031 | 23691015.39 | 9 35101.33859 | 4E+06 | 1748803.66 | | Total Load | |
| Wetland Function Value Net Yield | | | -14300336.7 | -990.163456 | -8713.438412 | -1360484.588 | -172486 | | | | 21377236.64 | | | 1748803.66 1578007.06 | 1 153518 | Final Load | 28836143.7 |
| Wetland Function Value | 1522651.359 -1370386.223 | 801812.363 -721631.1267 | -14300336.7 | -990.163456 | -8713.438412 | -1360484.588 | -172486 | | | | | | | | 1 153518 | | 28836143.7 82.9 |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High | 1522651.359 -1370386.223 | 801812.363 -721631.1267 | -14300336.7 | -990.163456 | -8713.438412 | -1360484.588 | -172486 | | | | | | | | 1 153518 | Final Load % Net | |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) | 1522651.359 -1370386.223 | 801812.363 -721631.1267 | 7 -14300336.7 3 1588926.3 | 7 -990.163456 3 110.0181618 | -8713.438412 968.1598236 | -1360484.588 151164.9543 | -172486 19165.16 | 44.007265 | | 261720.4268 | 21377236.64 | 31673.17267 | 3E+06 | 5 1578007.06 | 1 153518 6 138524 | Final Load % Net Removal | |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High | 1522651.359 -1370386.223 152265.1359 | 801812.363 -721631.1261 80181.2363 | 7 -14300336.7 3 1588926.3 | 7 -990.163456 8 110.0181618 | -8713.438412 8 968.1598236 | -1360484.588 151164.9543 592.2 | -172486 19165.16 | 44.007265 | 117341.2 | 261720.4268 | 21377236.64 | 31673.17267 | 3E+06 | 5 1578007.06 | 1 153518 6 138524 7 101.8 17293. | Final Load % Net Removal | |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below | 1522651.359 -1370386.223 152265.1359 | 801812.363 -721631.1267 80181.2363 | 7 -14300336.7 3 1588926.3 3 3345 3 8763.233449 | 7 -990.163456 8 110.0181618 6 0.5 9 1.309900366 | 8 -8713.438412 8 968.1598236 5 2.2 5 5.763561611 | -1360484.588 151164.9543 592.2 | -172486 19165.16 19165.16 1.6 4.191681 | 44.007265 | 117341.2 1 82.8 1 216.9195 | 261720.4268 261720.4268 224.8 588.9312046 | 21377236.64 11450.7 29998.55224 | 31673.17267 7 6 1 15.71880439 | 3E+06 72.4 9 189.67 | 1578007.06 1578007.06 4 836 7 2191.98727 | 1 153518 6 138524 7 101.8 17293.3 3 266.7 | Final Load % Net Removal | |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 45305 Concentration Wetland Function Factor | 1522651.359 -1370386.223 152265.1359 496.1 1299.683143 260 -0.9 | 801812.363 -721631.1267 80181.2363 80.381.2363 80.381.2363 80.381.2363 210.3699988 266 -0.9 | 7 -14300336.7 3 1588926.3 3 3345 3 8763.233449 9 -0.9 | -990.163458 110.0181618 110.0181618 5 0.5 9 1.309900368 9 -0.9 | 8 -8713.438412 968.1598236 5 - 2.2 5 5.763561611 260 9 -0.9 | -1360484.588 151164.9543 151164.9543 592.2 1551.445994 260 -0.9 | -172486 19165.16 19165.16 1.6 4.191681 260 -0.9 | 44.007265 0 0 0 260 -0.9 | 82.8 216.9195 130 0.2 | 261720.4268 224.8 588.9312046 130 0.2.2 | 21377236.64 11450.7 29998.55224 130 0.2 | 31673.17267 7 6 1 15.71880439 0 130 2 0.2 | 7 3E+06 72.4 9 189.67 0 130 2 0.2 | 4 836 7 2191.98727 0 13 | 1 153518 6 138524 7 101.8 17293. 3 266.7 0 130 2 0.2 | Final Load % Net Removal | 82.9 |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 45305 Concentration Wetland Function Factor Load | 1522651.359 -1370386.223 152265.1359 496.1 1299.683143 260 -0.9 416831.5184 | 801812.96; -721631.126; 80181.236; | 7 -14300336.7 1588926.3 3 3345 3 8763.233446 0 266 9 -0.9 2 2810524.953 | 990.163456 110.0181618 110.0181618 10.0181618 10.0181618 10.0181618 10.0181618 10.0181618 10.0181618 10.0181618 10.0181618 | 8 -8713.438412 968.1598236 5 - 2.2 6 -5.763561611 0 -0.9 1848.4768 | -1360484.588 151164.9543 151164.9543 592.2 1551.445994 260 -0.9 497576.3459 | 1.6 4.191681 260 -0.9 1344.347 | 0 0 0 260 -0.9 | 82.8 216.9195 130 0.2 73926.14 | 224.8 588.9312046 130 0.2 200707.6731 | 21377236.64 11450.7 29998.55224 130 0.2 10223502.46 | 7 6 15.71880439 1 15.21880439 2 0.2 5356.966363 | 7 3E+06 72.4 9 189.67 0 130 2 0.2 8 64641 | 4 836 7 2191.98727 0 13 2 0 747028.958 | 1 153518 6 138524 7 101.8 17293. 3 266.7 0 130 2 0.2 4 90890 | Final Load % Net Removal | 82.9 |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 45035 Concentration Wetland Function Factor Load Wetland Function Value Wetland Function Value | 1522651.359 -1370386.223 152265.1359 496.1 1299.683143 260 -0.9 41681.35148.3665 | 801812.36: -721631.126: 80181.236: 80181.236: 210.3699988 2606: -0.0. 677469.403: | 7 -14300386 7 3 1588926.3 1588926.3 3 3345 3 8763.23344 0 260 0 -0.9 2 281052472 457 2 28252472 457 | 990.163456 3 110.0181618 110.0181618 1 1.30990386 1 266 2 266 2 420.10836 420.70836 378.0975272 | 8 -8713.438412 968.1598236 968.1598236 5 -5.763561611 10 -260 1 -0.9 1 -0.9 1 -0.9 1 -0.9 1 -0.9 | -1360484.588 151164.9543 151164.9543 592.2 1551.445994 260 -0.9 497576.3459 -447818.7113 | 1.6 4.191681 260 -0.9 1344.347 -1209.91 | 0 0 0 260 -0.9 0 | 82.8 216.9195 0 130 0 0.2 73926.14 14785.23 | 24.8 588.9312046 220707.6731 40141.53462 | 21377236.64 11450.7 29998.55224 130 0.2 10223502.46 2044700.491 | 31673.17267 7 6 15.71880439 1 130 2 0.2 5 5356.966363 1071.393273 | 7 3E+06 72.4 189.67 130 2 0.2 6 64641 12928 | \$ 1578007.06 4 836 7 2191.98727 0 13 2 0 0 1 747028.955 3 149405.791 | 7 101.8 17293. 3 266.7 0 130 2 0.2 4 90890 9 18178 | Final Load % Net Removal 3 Total Load | 82.9 15111178.0 |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 45305 Concentration Wetland Function Factor Load | 1522651.359 -1370386.223 152265.1359 496.1 1299.683143 260 -0.9 416831.5184 | 801812.96; -721631.126; 80181.236; | 7 -14300386 7 3 1588926.3 1588926.3 3 3345 3 8763.23344 0 260 0 -0.9 2 281052472 457 | 990.163456 3 110.0181618 110.0181618 1 1.30990386 1 266 2 266 2 420.10836 420.70836 378.0975272 | 8 -8713.438412 968.1598236 968.1598236 5 -5.763561611 10 -260 1 -0.9 1 -0.9 1 -0.9 1 -0.9 1 -0.9 | -1360484.588 151164.9543 151164.9543 592.2 1551.445994 260 -0.9 497576.3459 -447818.7113 | 1.6 4.191681 260 -0.9 1344.347 -1209.91 | 0 0 0 260 -0.9 0 | 82.8 216.9195 130 0.2 73926.14 | 24.8 588.9312046 220707.6731 40141.53462 | 21377236.64 11450.7 29998.55224 130 0.2 10223502.46 | 31673.17267 7 6 15.71880439 1 130 2 0.2 5 5356.966363 1071.393273 | 7 3E+06 72.4 189.67 130 2 0.2 6 64641 12928 | 4 836 7 2191.98727 0 13 2 0 747028.958 | 7 101.8 17293. 3 266.7 0 130 2 0.2 4 90890 9 18178 | Final Load % Net Removal | |

Table C17. High Watershed Functions for Sediments - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario A - Sedimei | nts | | | | | | | | | | | | | | |
|--|--|---------------------------|---------------------------------|-----------------------------|-------------------------|-----------------------------|----------------------|-------------|----------------------|----------------------------|----------------------------|----------------------------|----------------|--------------------------|--------------------|-----------------------------|--------------------------|
| Contour Range | Comment of the state of the sta | C | DI II 40 | Riparian 43 | River 45 | 004 | M | Canalhan 24 | 0-4 20 | C-#/ 27 | C 20 | C 20 | C 40 | | Destruct I C Tete | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsn 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 4 | Pasture LC Tota | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 6.7 | | 42 | 0.1 | 0 | 0.9 | 0 | 0 | 0.8 | 0 | 18 | 0 | 0.1 | 1 2. | 9 1.7 73. | 1 | |
| /olume = 388 | 35.5622435 | | | 0.530779754 | . 0 | | | | 4.246238 | 0 | 95.54035568 | | | 15.3926128 | | | |
| Concentration/Export Coefficient | 35.3622433 | 150 | | | | 150 | | | | | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 130 | | | | | 1 1 | | |
| Load | 6580.064134 | -0.1 | | 98.20991245 | | 883.889212 | | | 827.7681 | | 18624.78224 | | | | | Total Load | 73126.0144 |
| | | | | | | | | | | | | | | | | TOTAL LOAD | 73120.0144 |
| Wetland Function Value | -658.0064134 5922.057721 | C | | -9.820991245 88.3889212 | | -88.3889212 795.5002908 | | | 827.7681 749.2002 | | 18624.78224 | | 103.47 | | | | 65937.0488 |
| Net Yield | 5922.057721 | (| 3/123.34691 | 88.3889212 | 0 | 795.5002908 | 0 | 0 | 749.2002 | U | 16857.00382 | - 0 | 93.65 | 2715.85061 | 5 1592.1 | Final Load | 65937.0488 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.8 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | 10.8 | 375.7 | 0.1 | 1.1 | 170.8 | 0.2 | 0 | 5.2 | 6.5 | 1500.4 | 2.4 | 3.7 | 7 113. | 1 9.9 2370. | R | |
| 280 ft | 43.3 | 1.4 | | 0.1 | | 9.8 | | | | | | | | | | | |
| Volume Season 1 = 6707 | 483.7594905 | 30.55323098 | | 0.282900287 | 3.111903155 | 483.1936899 | | | 14.71081 | | 4244.635903 | | | 319.960224 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | 0.372708758 | | 36.52545825 | | | 7.081466 | | 199.7718941 | 0.372708758 | | 3 76.7780040 | | | |
| Concentration/Export Coefficient | 101.0020021 | 0.217022007 | 001.0010011 | 0.072700700 | | 00.02010020 | 0.012100 | - | 7.001100 | | 100.77 100 77 | 0.072700700 | 2.2000 | 70.7700010 | 7 10.020 | | |
| Season 1 Concentration/Export Coefficient | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | _ | | | | | | 0 0 | 1 | |
| Wetland Function Factor | | | | | | | | | 1 | | - | 0 | 1 | , | 1 1 | + | |
| | -0.1 | -0.1 5653.249051 | | -0.1 52.34489862 | -0.1 | -0.1 89405.08684 | | | 2858.723 | 2572 (211 | 824851.6311 | 4040 440707 | 20011 | 00477.0000 | | + | |
| Load Season 1 * | 89509.77664 | | | | 575.7938848 | | | | | | | | | 62177.2323 | | Tetal I as 1 | 4000000 00 |
| Load Season 2 ** | 51758.3661 | 1673.480659 | 189820.5205 | 119.5343328 | 0 | 11714.36461 | 119.5343 | 0 | 2271.152 | 0 | 64070.40238 | 119.5343328 | /17.21 | 24624.0725 | 5 5140 | Total Load | 1636365.93 |
| Wetland Function Value (Both | -14126.81427 | -732.672971 | -38648.03046 | -17.18792314 | -57.57938848 | -10111.94515 | 00.40- | 1 . | 5129.876 | 0.570 (| 888922.0335 | 4 400 | | 86801.3049 | 40500 | 1 | |
| Seasons) * Export Coefficients were reduced by 50% for upland and ag land covers | -14126.81427 | -/32.6/29/1 | -38648.03046 | -17.18/92314 | -57.5/938848 | -10111.94515 | -22.4224 | 0 | 5129.876 | 35/3.40416 | 888922.0335 | 1438.9451 | 2/51.3 | 3 86801.3049 | 4 10583 | | |
| ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 127141.3285 | 6594.056739 | 347832.2741 | 154.6913083 | 518.2144963 | 91007.50631 | 201.8017 | 0 | 4630.567 | 3233.162319 | 803976.7074 | 1301.36391 | 2485.9 | 78418.6896 | 6 9550.3 | Final Load | 1477046.59 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.7 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | 0.1 | | 121.9 | | | 2.6 | 0.1 | | | | | | | |
| 280 ft | 43.3 | 1.4 | | | | 9.8 | | | | | | | | | | 6 | |
| Volume Season 1 = 2190 | 231.6646835 | 8.07829605 | | | | | | | 6.775345 | | 836.2339362 | | | 125.865064 | | | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | 591.8615071 | 0.372708758 | 0 | 36.52545825 | 0.372709 | 0 | 7.081466 | 0 | 199.7718941 | 0.372708758 | 2.2363 | 76.7780040 | 7 16.026 | | |
| Concentration/Export Coefficient Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 0 | 0 | | 0 | | 1 | 0 0 | | |
| Wetland Function Factor | -0.1 | | | | | -0.1 | | | | 1 | 1 | 1 | 1 | , | 1 1 | | |
| Load Season 1 * | 42864.80055 | | | 48.21687351 | | 58776.36881 | | | 1322.033 | | 163169.3821 | | 4E7 63 | 3 24559.3055 | | | |
| Load Season 2 ** | 51758.3661 | 1673.480659 | | | | 11714.36461 | | | 2271.152 | | 64070.40238 | | | | | Total Load | 767428.100 |
| Wetland Function Value (Both | 51756.3001 | 1073.400000 | 109020.5205 | 119.5343320 | 0 | 11714.30401 | 119.5343 | 0 | 22/1.152 | U | 64070.40236 | 119.5343326 | /1/.21 | 24024.0725 | 5 5140 | TOTAL LOAD | 767426.100 |
| | 0.400.04000 | 040 0000700 | 00774 07700 | 40 77540000 | 50 00050000 | 7040 070040 | 40 7754 | ١ . | 0500 405 | 50.04740054 | 007000 7044 | 070 070000 | | 40400 0704 | 4 0055 0 | | |
| Seasons) | -9462.316665 | -316.8203738 | | -16.77512063 | | | | | 3593.185 | | 227239.7844 | | | 49183.3781 | | | |
| Net Yield | 85160.84999 | 2851.383364 | 276939.6986 | 150.9760857 | 477.3470478 | 63441.66008 | 150.9761 | 0 | 3240.706 | 46.02573616 | 205359.9495 | 245.658108 | 1059.7 | 44392.0958 | 7 8170 | Final Load % Net | 691687.00 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.8 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | 1 | | | |
| (existing conditions) | | | | | | | | 1 | | | | | 1 | | | | |
| 300 and below | 692 | | | | | 687 | | | | 643.7 | | | 8211.8 | | | 7 | |
| Volume = 515089 | 4747.635956 | 2500.055697 | | 3.4303728 | | 4713.332228 | | | | | 360718.7936 | | | 26627.2397 | | | |
| Concentration | 260 | 260 | | 260 | | 260 | | | | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | 1 | 1 | 1 | 1 | 1 1 | | |
| Load | 1522651.359 | | | | | | | | | | | | | 8744018.30 | | Total Load | 168671861. |
| Wetland Function Value | -152265.1359 | | | | | -151164.9543 | | | | 1450239.515 | | | | | | | |
| Net Yield | 1370386.223 | 721631.1267 | 14300336.7 | 990.163456 | 8713.438412 | 1360484.588 | 172486.5 | 396.06538 | 586705.9 | 1308602.134 | 106886183.2 | 158365.8633 | 2E+07 | 7890035.3 | 3 692622 | Final Load | 152152018. |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.7 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | |
| Flow (existing conditions) | | | | | | | | <u> </u> | 06.7 | | 44455 | | 76 | | 7 404.0 47777 | - | |
| 290 and below | 496.1 | 80.3 | | 0.5 | | 592.2 | | | | 224.8 | | 6 | | | | 3 | |
| | 1299.683143 | | | | | | | | 216.9195 | | 29998.55224 | | | 2191.98727 | | | |
| Volume = 45305 | 260 | 260 | 260 | 260 | 260 | 260 | | | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Volume = 45305 Concentration | 200 | | | | | | | | | | | | | | | | |
| Volume = 45305 Concentration | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 1 | | |
| Volume = 45305 Concentration | | -0.1 67469.4032 | | | | -0.1 497576.3459 | | | 73926.14 | | 10223502.46 | | | | | Total Load | 15111178.0 |
| Volume = 45305 Concentration Wetland Function Factor Load | -0.1 | | 2810524.953 | 420.1083636 | 1848.4768 | 497576.3459 | 1344.347 | 0 | | 200707.6731 | 10223502.46 | 5356.966363 | 64641 | 747028.959 | 4 90890 | Total Load | 15111178.0 |
| Volume = 45305 Concentration Wetland Function Factor | -0.1 416831.5184 -41683.15184 | 67469.4032 -6746.94032 | 2 2810524.953 2 -281052.4953 | 420.1083636 -42.01083636 | 1848.4768 -184.84768 | 497576.3459 -49757.63459 | 1344.347 -134.435 | 0 | 73926.14 73926.14 | 200707.6731 200707.6731 | 10223502.46 10223502.46 | 5356.966363 5356.966363 | 64641 64641 | 747028.959 747028.959 | 4 90890 4 90890 | | |
| Volume = 45305 Concentration Wetland Function Factoroad Wetland Function Value | -0.1 416831.5184 | 67469.4032 | 2 2810524.953 2 -281052.4953 | 420.1083636 -42.01083636 | 1848.4768 -184.84768 | 497576.3459 -49757.63459 | 1344.347 -134.435 | 0 | 73926.14 | 200707.6731 200707.6731 | 10223502.46 | 5356.966363 5356.966363 | 64641 64641 | 747028.959 | 4 90890 4 90890 | Total Load Final Load % Net | 15111178.0 13749072.7 |

Table C18. Low Watershed Functions for Sediments - New Madrid Floodway.

| New Madrid Floodway - Lo | w Retention Sc | enario B - Sedime | nts | | I | | | | | | | | | | | | |
|---|-----------------------------|----------------------------|--------------|----------------------------|--------------|----------------------------|----------|------------|----------------------|--------------------|----------------------------|-----------------|---------|--------------------------|-----------------|--------------------------------|-------------------|
| • | | | | | | | | | | | | | | | | | |
| Contour Range Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Tota | | |
| Conditions (No Flood) | | | | | _ | | | | | | | | | | | | |
| 275 ft Volume = 388 | 6.7 35.5622435 | 0 | | | | | | | 0.8 4.246238 | | 95.54035568 | | | 2. | | 1 | |
| Concentration/Export Coefficient | 35.5622435 | 150 | | 0.530779754 | | | | | | | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 130 | 1 130 | 1 130 | 1 | , 13 | 1 1 | | |
| Load | 6580.064134 | | | | | | | | 827.7681 | C | 18624.78224 | 1 0 | 103.47 | 3000.65936 | | Total Load | 73126.0144 |
| Wetland Function Value | -658.0064134 | (| | | | | | | 827.7681 | | 18624.78224 | | 103.47 | 3000.65936 | 1 1759 | | |
| Net Yield WATERSHED FUNCTION | 5922.057721 | 0 | 37123.34691 | 88.3889212 | 0 | 795.5002908 | S C | 0 | 749.2002 | : c | 16857.00382 | 2 0 | 93.65 | 2715.85061 | 5 1592.1 | Final Load % Net Removal | 65937.0488 9.8 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 171 | | | | | | | | | | | | | | | | |
| 280 ft Volume Season 1 = 6707 | 43.3 483.7594905 | 30.55323098 | | | | | | | 1.9 | | 53.6 | 6.789606884 | | 319.960224 | | 6 | |
| Volume Season 2 = 1098 | 161.3828921 | 5.217922607 | | 0.262900267 | | | | | 7.081466 | | 199.7718941 | | | 76.7780040 | | | |
| Concentration/Export Coefficient Season 1 | 150 | | | 150 | 150 | | | | 130 | | | | | | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 260 | 260 | | 260 | | 260 | | 260 | 0 | 0 0 | 0 |) (| 0 | | 0 0 | | |
| Wetland Function Factor Load Season 1 * | -0.1 89509.77664 | -0.1 5653.249051 | | -0.1 52.34489862 | | | | | 2995.512 | 37// 38001 | 864320.4033 | 1382542067 | 2131 4 | 65152.3844 | 1 1 4 5703 | 1 | |
| Load Season 2 ** | 51758.3661 | 1673.480659 | | 119.5343328 | | | | | 2995.512 | | 64070.40238 | | | 24624.0725 | | Total Load | 1679538.519 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) * Export Coefficients were NOT reduced by 50% for upland and agland covers | -14126.81427 | -732.672971 | -38648.03046 | -17.18792314 | -57.57938848 | -10111.94515 | -22.4224 | 0 | 5266.664 | 3744.38991 | 928390.8057 | 1502.0783 | 2848.6 | 89776.4569 | 9 10843 | | |
| ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| Net Yield | 127141.3285 | 6594.056739 | 347832.2741 | 154.6913083 | 518.2144963 | 91007.50631 | 201.8017 | 0 | 4767.356 | 3404.148069 | 843445.4796 | 1364.49711 | 2583.2 | 81393.8417 | 1 9810.8 | Final Load | 1520219.18 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.49 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 88.9 | 3.1 | | 0.1 | | | | | | | | | | | | | |
| 280 ft | 43.3 | | | | | | | | | | | | | | | 6 | |
| Volume Season 1 = 2190 Volume Season 2 = 1098 | 231.6646835 161.3828921 | 8.07829605 5.217922607 | | 0.260590195 0.372708758 | | | | | 6.775345 7.081466 | 0.260590195 | 836.2339362 | 0.781770585 | | 125.865064 76.7780040 | | | |
| Concentration/Export Coefficient | 101.3020921 | 5.217922007 | 391.0013071 | 0.372700730 | | 30.32343623 | 0.312108 | - 0 | 7.001400 | , | 199.7710941 | 0.372700730 | 2.2303 | 70.7700040 | 7 10.020 | _ | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 260 | 260 | | | | 260 | | | 0 | 0 | 0 0 | 0 | 0 |) | 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | -0.1 | | | | | | 1 50 47707054 | 17101001 | 1 100 100000 | 1 101.0 | 05000 0040 | 1 1 | | |
| Load Season 1 * Load Season 2 ** | 42864.80055 51758.3661 | 1494.723079 | | 48.21687351 119.5343328 | | 58776.36881 11714.36461 | | | 1390.427 2271.152 | | 171610.817 | | | 25829.8612 | | Total Load | 777445.2351 |
| Wetland Function Value (Both | 51/56.3001 | 1073.400003 | 169620.5205 | 119.5343320 | U | 11714.30401 | 119.5343 | U | 22/1.152 | | 04070.40236 | 119.5343326 | 111.21 | 24024.0725 | 5 5140 | TOTAL LOAD | 111445.235 |
| Seasons) | -9462.316665 | -316.8203738 | -30771.07762 | -16.77512063 | -53.03856086 | -7049.073343 | -16,7751 | 0 | 3661.58 | 53.47797351 | 235681.2194 | 279.9682533 | 1198.5 | 50453.9337 | 6 9257.8 | | |
| Net Yield | 85160.84999 | 2851.383364 | 276939.6986 | 150.9760857 | 477.3470478 | | | | 3309.101 | | 213801.3844 | | | 45662.6515 | | Final Load % Net | 701704.1384 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.74 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 692 4747.635956 | | | | | | | | | | 52577.2 | | 8211.8 | | | 7 | |
| Volume = 515089 Concentration | 4747.635956 260 | | | | | 4713.332228 | | | | | | | | 26627.2397 | | + + | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | | | | | | | | 1 1 | | |
| Load | 1522651.359 | 801812.363 | | 1100.181618 | 9681.598236 | | | | | 1450239.515 | | | | | | Total Load | 168671861. |
| Wetland Function Value | -152265.1359 | -80181.2363 | -1588926.3 | -110.0181618 | -968.1598236 | -151164.9543 | -19165.2 | -44.007265 | 650208.4 | 1450239.515 | 118455077 | 175506.6929 | 2E+07 | 8744018.30 | 5 767588 | | |
| Net Yield WATERSHED FUNCTION | 1370386.223 | 721631.1267 | 14300336.7 | 990.163456 | 8713.438412 | 1360484.588 | 172486.5 | 396.06538 | 586705.9 | 1308602.134 | 106886183.2 | 158365.8633 | 2E+07 | 7890035.3 | 3 692622 | % Net | 152152018. |
| WATERSHED FUNCTION Scenario 5 - Moderate High | | | | | | | | | | | | | | | | Removal | 9.7 |
| Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 496.1 | 80.3 | | 0.5 | 5 2.2 | | | | 82.8 | 224.8 | 11450.7 | 7 6 | 72.4 | 836. | 7 101.8 17293. | 3 | |
| Volume = 45305 | 1299.683143 | 210.3699988 | 8763.233449 | 1.309900366 | 5.763561611 | 1551.445994 | 4.191681 | 0 | 216.9195 | 588.9312046 | 29998.55224 | | 189.67 | 2191.98727 | | | |
| Concentration | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 130 | 130 | 130 | 130 | 130 | 13 | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | -0.1 | | | 10000 | 1 | 1 | 7476 | 1 1 | | |
| Motland Eupation Value | 416831.5184 | | | | | | | | 73926.14 | | 10223502.46 | | | 747028.959 | | Total Load | 15111178.0 |
| Wetland Function Value Net Yield | -41683.15184 375148.3665 | -6746.94032 60722.46288 | | | | | | | 73926.14 66969.14 | | 10223502.46 9261395.488 | | | 747028.959 676728.025 | | Final Load | 13749072.7 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.0 |

Table C19. Low (no runoff reduction) Watershed Functions for Sediments - New Madrid Floodway.

| Contour Range Cypri Scenario 1 - Existing Conditions (No Flood) 275 ft Volume = 644 Concentration/Export Coefficient Wetland Function Factor Load WatersHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Usual Season 1 = 1 Load Season 2 = 1 Vetland Function Value (Both Seasons) | 15.32 90.28257687 1.5 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 1.2 -0.8 | Scrub/shrub marsh 19 0 0 1.50.8 0 0 0 0 1.51.51.51.11.1. | 28.3 166.7752562 5 1.5 3 0.8 308.5834227 2-246.8667382 61.71668454 171.72 1670.969099 553.1024348 | 125.464498 1.6 9.6 232.1463275 -185.717062 46.42926551 71.34 3.4 3.1 161.1252912 | 0 0 0 1.5 -0.2 0 0 0 | 8.95 52.74341142 1.5 97.59087043 -29.27726113 68.3136093 | 5 0 2 0 5 1.5 3 -0.8 3 0 3 0 | 0 0 1.5 -0.2 0 | 6.77 39.89641 6.75 | 0 9.75 1 0 | 18.42 108.5512445 15 1 312.670435 | 0 0 9.75 1 0 | 0.04 0.2357 6.75 1 0.5454 0.5454 | | 31 3.38 53 19.919 75 3.75 1 1 72 41.985 72 41.985 | 109.28 | Total Load Final Load % Net Removal | 698.1861452 |
|--|--|--|---|---|---|---|---|----------------------------|---|--------------------------|---|--------------------------|---|--|--|---------|-------------------------------------|-------------------------------------|
| Scenario 1 - Existing Conditions (No Flood) 275 ft Volume = 644 Concentration/Export Coefficient Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 2856 ft 2800 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 2 Volume Season 2 - 1692 Volume Season 1 = 1000 Volume Season 1 = | 15.32 90.28257687 1.5 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 1.2 -0.8 | 0 0 1.5.5 -0.8.8 0 0 0 0 | 28.3 166.7752562 5 1.5 3 0.8 308.5834227 2-246.8667382 61.71668454 171.72 1670.969099 553.1024348 | 21.25 125.4644945 1 | 0 0 0 1.5 -0.2 0 0 0 | 8.95 52.74341142 1.5 -0.3 97.59087043 -29.27726113 68.3136093 | 5 0 2 0 5 1.5 3 -0.8 3 0 3 0 | 0 0 1.5 -0.2 0 | 6.77 39.89641 6.75 1 92.31391 92.31391 | 0 0 9.75 1 0 | 18.42 108.5512445 15 1 312.670435 312.670435 | 0 0 9.75 1 0 | 0.04 0.2357 6.75 1 0.5454 0.5454 | 6. 40.132137 1.8 79.423806 79.423806 | 31 3.38 53 19.919 75 3.75 1 1 72 41.985 72 41.985 | 109.28 | Total Load Final Load % Net | 698.1861452 |
| Conditions (No Flood) 275 ft Volume s 644 Concentration/Export Coefficient Welland Function Factor Load Welland Function Value Net Yield Welland Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project [2 seasons] 285 ft 800 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Cond Season 1 = 1000 Con | 90.28257887 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 | 0 1.5 0.8 0 0 0 0 0 | 166.7752562 5 1.5 0.8 308.533427 -246.8667382 0 61.71668454 0 739.84 1717.27 1670.969099 553.1024348 | 125.464498 1.6 9.6 232.1463275 -185.717062 46.42926551 71.34 3.4 3.1 161.1252912 | 0 1.5 -0.2 0 0 0 0 | 52.74341142 1.5 -0.3 97.59087043 -29.27726113 68.3136093 | 2 0 5 1.5 1.5 8 -0.8 8 0 8 0 | 0 1.5 -0.2 0 | 39.89641 6.75 1 92.31391 92.31391 | 0 9.75 1 0 | 108.5512445 15 1 312.670435 312.670435 | 0 9.75 1 0 | 0.2357 6.75 1 0.5454 0.5454 | 40.132137 1.8 79.423806 79.423806 | 33 19.919 75 3.75 1 1 72 41.985 72 41.985 | | Total Load Final Load % Net | 698.1861452 |
| 275 ft Volume = 644 Concentration/Export Coefficient Wetland Function Factor Load Wetland Function Factor Load Water Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 226 ft 220 ft Volume Season 1 = 7238 Volume Season 2 = 1692 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Load Season 1 = 1 Load Season 1 = 1 Load Season 2 ** Wetland Function Factor Load Season 1 ** Load Season 2 ** Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 90.28257887 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 | 0 1.5 0.8 0 0 0 0 0 | 166.7752562 5 1.5 0.8 308.533427 -246.8667382 0 61.71668454 0 739.84 1717.27 1670.969099 553.1024348 | 125.464498 1.6 9.6 232.1463275 -185.717062 46.42926551 71.34 3.4 3.1 161.1252912 | 0 1.5 -0.2 0 0 0 0 | 52.74341142 1.5 -0.3 97.59087043 -29.27726113 68.3136093 | 2 0 5 1.5 1.5 8 -0.8 8 0 8 0 | 0 1.5 -0.2 0 | 39.89641 6.75 1 92.31391 92.31391 | 0 9.75 1 0 | 108.5512445 15 1 312.670435 312.670435 | 0 9.75 1 0 | 0.2357 6.75 1 0.5454 0.5454 | 40.132137 1.8 79.423806 79.423806 | 33 19.919 75 3.75 1 1 72 41.985 72 41.985 | | Total Load Final Load % Net | 698.186145 |
| \(Volume = 644 \) \(Concentration \text{Export Coefficient} \) \(Wetland Function Factor Load \) \(Wetland Function Value \) \(Wetland Function Value \) \(Wetland Function Value \) \(Watersheld \) \(Value Season 2 - Authorized Project (2 seasons) \) \(285 \tau \) \(Volume Season 1 = 7298 \) \(Volume Season 2 = 1692 \) \(Concentration \text{Vexport Coefficient} \) \(Season 1 \) \(Concentration \text{Vexport Coefficient} \) \(Season 1 \) \(Concentration \text{Vexport Coefficient} \) \(Season 1 \) \(Concentration \text{Vexport Coefficient} \) \(Season 2 \) \(Concentration \text{Vexport Coefficient} \) \(Season 1 \) \(Concentration \text{Vexport Coefficient} \) \(Season 2 \) \(Concentration \text{Vexport Coefficient} \) \(Con | 90.28257887 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 | 0 1.5 0.8 0 0 0 0 0 | 166.7752562 5 1.5 0.8 308.533427 -246.8667382 0 61.71668454 0 739.84 1717.27 1670.969099 553.1024348 | 125.464498 1.6 9.6 232.1463275 -185.717062 46.42926551 71.34 3.4 3.1 161.1252912 | 0 1.5 -0.2 0 0 0 0 | 52.74341142 1.5 -0.3 97.59087043 -29.27726113 68.3136093 | 2 0 5 1.5 1.5 8 -0.8 8 0 8 0 | 0 1.5 -0.2 0 | 39.89641 6.75 1 92.31391 92.31391 | 0 9.75 1 0 | 108.5512445 15 1 312.670435 312.670435 | 0 9.75 1 0 | 0.2357 6.75 1 0.5454 0.5454 | 40.132137 1.8 79.423806 79.423806 | 33 19.919 75 3.75 1 1 72 41.985 72 41.985 | | Total Load Final Load % Net | 698.1861452 |
| Concentration/Export Coefficient Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft 280 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 2 Concentration/Export Coefficient Season 2 Load Season 1 Load Season 1 Load Season 1 ** Uetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 1.5 -0.8 167.0494006 -133.6395205 33.40988011 250.07 80.22 564.796773 258.3850298 1.5 1.2 -0.8 | 1.5.5 -0.8 0 0 0 0 0 0 0 0 0 0 0 0 1.5 | 5 1.5. 3 0.8. 308.5834227 5 -246.8667382 6 1.71668454 7 39.845 7 39.845 7 171.72 7 1670.969099 7 553.1024348 | 1.5 -0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0 | 1.5 -0.2 0 0 0 | 1.5 -0.3 97.59087043 -29.27726113 68.3136093 | 5 1.5 3 -0.8 3 0 3 0 3 0 | 1.5 -0.2 0 | 6.75 1 92.31391 92.31391 | 9.75 1 0 | 15 1 312.670435 312.670435 | 9.75 1 0 | 6.75 1 0.5454 0.5454 | 79.423806 79.423806 | 75 3.75 1 1 72 41.985 72 41.985 | | Final Load % Net | 698.1861452 |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft Volume Sason 1 = 7298 Volume Sason 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Wetland Function Factor Load Season 1 * Unda Season 2 * Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 167.0494006 -133.6395205 -33.40988011 -250.07 -80.22 -564.7967703 -258.3850298 -1.5 -1.2 -0.8 -1.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0 | 0.8 0 0 0 0 0 0 0 0 0 | 3 | -0.8 232.1463275 -185.717062 46.42926551 71.34 34.25 161.1252913 | -0.2 0 0 0 0 0 | 97.59087043 -29.27726113 68.3136093 | 3 -0.8 3 0 3 0 3 0 | -0.2 0 | 92.31391 92.31391 | 1 0 0 | 1 312.670435 312.670435 | 1 0 0 | 0.5454 0.5454 | 79.423806 79.423806 | 1 1 72 41.985 72 41.985 | | Final Load % Net | 698.1861452 |
| Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft 280 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Wetland Function Factor Load Season 1 Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | -133.6395205 33.40988011 250.07 80.22 564.7967703 258.3850298 1.5 -0.8 1045.04064 | 0 0 0 0 0 0 0 | 246.8667382 61.71668454 01.71668454 01.71688454 01.717969099 01.717969099 01.717969099 01.717969099 | -185.717062 46.42926551 71.34 34.25 161.1252913 | 0 0 | -29.27726113 68.3136093 112.71 | B 0 B 0 | 0 | 92.31391 | 0 | 312.670435 | 0 | 0.5454 | 79.423806 | 72 41.985 | | Final Load % Net | 1332.308723 698.1861452 47.60 |
| Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft (2 seasons) 285 ft (2 seasons) 286 ft (2 seasons) 287 ft (2 seasons) 287 ft (2 seasons) 288 ft (2 seasons) Wetland Function Factor Load Season 1 ** Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 250.07 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 | 0 0 0 0 0 | 246.8667382 61.71668454 01.71668454 01.71688454 01.717969099 01.717969099 01.717969099 01.717969099 | -185.717062 46.42926551 71.34 34.25 161.1252913 | 0 0 | 68.3136093 112.71 | 3 0 | | | | | | | | | | % Net | |
| Net Yield WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft (2 seasons) 285 ft (2 seasons) 286 ft (2 seasons) 287 ft (2 seasons) 287 ft (2 seasons) 288 ft (2 seasons) Wetland Function Factor Load Season 1 ** Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 250.07 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 | 0 0 0 0 | 739.84 1 171.72 1 1670.96909 553.1024348 | 46.42926551 71.34 34.25 161.1252913 | 0 | 68.3136093 112.71 | 3 0 | | | 0 | | 0 | | | | | % Net | |
| WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft 280 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 1 Wetland Function Factor Load Season 1 = 10ad Season 1 Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 250.07 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 | 0 0 0 0 1.5 |) 171.72) 1670.969099) 553.1024348 | 34.25 161.1252913 | 0 | 112.71 | | | | | | | | | | | % Net | |
| 2 seasons | 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 1045.04064 | 0 0 0 0 1.5 |) 171.72) 1670.969099) 553.1024348 | 34.25 161.1252913 | 0 | | | | | | | | | | | | \vdash | |
| 285 ft 280 ft Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration*Export Coefficient Season 1 Concentration*Export Coefficient Season 1 Load Season 1* Ucad Season 1* Wetland Function Value (Both Seasons) Wetland Function Value (Both Seasons) | 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 1045.04064 | 0 0 0 0 1.5 |) 171.72) 1670.969099) 553.1024348 | 34.25 161.1252913 | 0 | | | | | | | | | | 1 | | | |
| 280 ft Volume Sasson 1 = 7298 Volume Sasson 2 = 1692 Concentration/Export Coefficient Sasson 1 Concentration/Export Coefficient Sasson 2 Wetland Function Factor Load Sasson 1 Wetland Function Value (Both Season 9 Wetland Function Value (Both Season 9) | 80.22 564.7967703 258.3850298 1.5 1.2 -0.8 1045.04064 | 0 0 0 0 1.5 |) 171.72) 1670.969099) 553.1024348 | 34.25 161.1252913 | 0 | | 1 0 | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 104 | 02 52.73 | 2224 27 | | |
| Volume Season 1 = 7298 Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Load Season 1 Wetland Function Factor Load Season 2 Wetland Function Value (Both Seasons) | 564.7967703 258.3850298 1.5 1.2 -0.8 1045.04064 | 0 0 |) 1670.969099 553.1024348 | 161.1252913 | | | | | | | 153.73 | 0.01 | | 25 | | 525.31 | | |
| Volume Season 2 = 1692 Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Wetland Function Factor Load Season 1 * Load Season 2 * Wetland Function Value (Both Seasons) Seasons) | 258.3850298 1.5 1.2 -0.8 1045.04064 | 1.5 | 553.1024348 | | | 254.5616987 | | | 142.2212 | | 3938.716102 | | | 438.20478 | | | | |
| Concentration/Export Coefficient Season 1 Concentration/Export Coefficient Season 2 Wetland Function Factor Load Season 1 Wetland Function Value (Both Seasons) | 1.5 1.2 -0.8 1045.04064 | 1.5 | | 110.31//1/2 | | 99.49530753 | | 0 | | | 495.1574499 | 0.022565547 | | 80.717138 | | | | |
| Season 1 Concentration/Export Coefficient Season 2 Wetland Function Factor Load Season 1 Load Season 2 Wetland Function Value (Both Seasons) | 1.2 -0.8 1045.04064 | | 1.5 | | U | 99.49530753 | 0 | U | 35.0762 | U | 495.1574499 | U | 1.1918 | 00.717130 | 10 00.007 | | | |
| Season 2 Wetland Function Factor Load Season 1 * Load Season 2 ** Wetland Function Value (Both Seasons) | -0.8 1045.04064 | 4.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.8 | 75 3.75 | | | |
| Wetland Function Factor Load Season 1 * Load Season 2 ** Wetland Function Value (Both Seasons) | -0.8 1045.04064 | | | | | | | 4.0 | _ | _ | | _ | | | 0 - |] | | |
| Load Season 1 * Load Season 2 ** Wetland Function Value (Both Seasons) | 1045.04064 | | | | | 1.2 | | 1.2 | 0 | 0 | 0 | 0 | 0 | | 0 0 | | | |
| Load Season 2 ** Wetland Function Value (Both Seasons) | | -0.8 | | | | -0.3 | | -0.2 | 240.4505 | | 40500 222 | 1 0001510513 | 1 0 70 4 | 004 4005 | 1 1 | 1 | | |
| Wetland Function Value (Both Seasons) | 000 470 | 0 | | | | 471.0142382 | | | 349.1595 | | 12580.98954 | | | | | | | 04507.05 |
| Seasons) | 382.470823 | 0 | 818.7221356 | 163.2962564 | 0 | 147.276536 | 0 | 0 | 51.92106 | 0 | 732.949883 | 0 | 1.7641 | 119.48041 | 12 86.678 | | Total Load | 21507.36771 |
| | | | | | | 405 4 | | | 404 | 45 | 13313.93942 | | | 4005 | | 1 | | Į. |
| reduced by 50% for upland and ag land covers | -1142.00917 | 0 | -3128.406323 | -369.1404618 | 0 | -185.4872323 | 3 0 | 0 | 401.0806 | 15.07216711 | 13313.93942 | 0.061519049 | 8.5288 | 1003.9009 | 28 347.05 | | | |
| ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | | |
| Net Yield | 285.5022926 | 0 | 782.1015809 | 92.28511545 | 0 | 432.803542 | 2 0 | 0 | 369.5734 | 14.04831396 | 12511.86576 | 0.057340057 | 7.8426 | 910.87207 | 57 316.34 | | Final Load | 15723.29687 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 26.89 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | | | | | 44.74 | | | 16.58 | | 292.73 | | | 41 | | 825.36 | | |
| 280 ft | 80.22 | | | | | 30.89 | | | | | 153.73 | 0 | | 25. | | 525.31 | | |
| Volume Season 1 = 3080 | 377.2380537 | 0 | | | | 166.9564796 | 0 | | 61.87167 | | 1092.381991 | | | 153.74624 | | | | |
| Volume Season 2 = 1692 | 258.3850298 | 0 | 553.1024348 | 110.3177172 | 0 | 99.49530753 | 3 0 | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.717138 | 15 58.557 | | \vdash | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | ı l | |
| Season 1 Concentration/Export Coefficient | 1.5 | 1.5 | | | 1.5 | 1.5 | | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.8 | 75 3.75 | | | |
| Season 2 | 1.2 | 1.2 | | 1.2 | 1.2 | 1.2 | | 1.2 | 0 | 0 | 0 | 0 | 0 | | 0 0 | | | |
| Wetland Function Factor | -0.8 | -0.8 | | | | -0.3 | | -0.2 | 1 | | 1 | | | | 1 1 | | | |
| Load Season 1 * | 698.0016846 | 0 | | | | 308.9187394 | | | 137.1268 | | 2909.737668 | | | 300.10744 | | | | |
| Load Season 2 ** | 382.470823 | 0 | 818.7221356 | 163.2962564 | 0 | 147.276536 | 6 0 | 0 | 51.92106 | 0 | 732.949883 | 0 | 1.7641 | 119.48041 | 12 86.678 | | Total Load | 9148.274462 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | | |
| Seasons) | -864.378006 | 0 | -2082.162951 | -391.7472208 | 0 | -136.8585826 | | | 189.0479 | | 3642.687551 | | | 419.58785 | | | | |
| Net Yield | 216.0945015 | 0 | 520.5407378 | 97.9368052 | 0 | 319.3366928 | 3 0 | 0 | 172.4077 | 0 | 3367.269669 | 0 | 5.0745 | 379.19222 | 32 237.83 | | Final Load % Net | 5315.686459 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 41.89 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | 0 | | | | 274.41 | | 0 | | | | | 7497.1 | | | 54998.3 | | |
| Volume = 310381 | 3875.819129 | 0 | | | | 1548.623325 | | | 2349.318 | | | | | 21117.847 | 32 994.44 | | | |
| Concentration | 1.2 | 1.2 | | 1.2 | 1.2 | 1.2 | | 1.2 | 6.75 | | 15 | 9.75 | | 1.8 | | | | |
| Wetland Function Factor | -0.8 | -0.8 | -0.8 | -0.8 | -0.2 | -0.3 | -0.8 | -0.2 | | 1 | 1 | 1 | 1 | | 1 1 | | | |
| Load | 5737.127004 | 0 | | | | 2292.327996 | | | 4614.735 | | 516995.9557 | | | 34098.874 | | | Total Load | 704859.38 |
| Wetland Function Value | -4589.701603 | 0 | | -2486.717677 | | -687.6983988 | | | 4614.735 | | 516995.9557 | 300.3534375 | | | | | | |
| Net Yield | 1147.425401 | 0 | 8529.789146 | 621.6794193 | 83.93758137 | 1604.629597 | 138.6374 | 0 | 4266.981 | | 487054.4648 | 279.9537984 | 76845 | 30972.934 | 13 1592.2 | | Final Load | 621915.383 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 11.77 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | | |
| 290 and below | 485.21 | 0 | 2316.24 | 147.63 | 0 | 144.21 | 2.05 | 0 | 90 | 54.48 | 5842.45 | 1.44 | 78.44 | 590 | 25 102.57 | 9853 97 | | |
| Volume = 34372 | 1692.479084 | 0 | | | | 503.0242755 | | | 313,9324 | | 20379.26758 | 5.022917667 | | | | | + | |
| | | | | | | | | | | | | | | | | | + | |
| Concentration | 1.2 | 1.2 | | | | 1.2 | | 1.2 | | | | | | 1.8 | | | | |
| Wetland Function Factor | -0.8 | -0.8 | | | | -0.3 | | -0.2 | | | 05000 74000 | | | 0400 50 :- | 1 1 | | T-4-17 | 00040 505 |
| Load | 2505.268469 | 0 | | | | 744.5946415 | | | 710.5492 | | 65632.71826 | 13.11709156 | | | | | Total Load | 86943.58085 |
| Wetland Function Value | -2004.214776 | 0 | | | | -223.3783924 | | | 710.5492 | | 65632.71826 | 13.11709156 | | | | | Final I | 74705.007 |
| Net Yield | 501.0536939 | 0 | 2391.872814 | 152.4506025 | 0 | 521.216249 | 2.116939 | 0 | 664.0798 | 468.1338221 | 62616.1057 | 12.3735812 | 5/8.78 | 3185.3394 | 97 632.3 | | Final Load | 71725.82459 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 17.50 |

Table C20. Expected Watershed Functions for Nitrogen - St. Johns Bayou.

| St. Johns Bayou - High Re | tention Scenario | - mitrogen | | - | | | | - | | | | | | | + + - | + + | |
|---|--|----------------------|-------------------------------------|---------------------------------|--------------------|-------------------------------------|-----------------------------|------------|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|---------------------------|--------------------------|
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) 275 ft | 15.32 | (| 28.3 | 21.29 | 9 0 | 8.95 | | | 6.77 | 0 | 18.42 | 0 | 0.04 | 6.8 | 1 3.38 109.28 | | |
| Volume = 644 | 90.28257687 | | | | | | | | 39.89641 | | 108.5512445 | | | 40.1321376 | | 9 | |
| Concentration/Export Coefficient | 1.5 | 1.5 | | | | 1.5 | | | | 9.75 | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | 0.2 | 0.2 | | | 0.2 | 0.: | 2 0.2 | | |
| Load | 167.0494006 | C | | | | | | | 92.31391 | | 312.670435 | | | 79.4238067 | | Total Load | 1332.30872 |
| Wetland Function Value | -150.3444605 | C | | | | | | | 18.46278 | | 62.53408699 | | 0.1091 | | | | |
| Net Yield | 16.70494006 | | 30.85834227 | 23.21463275 | 5 0 | 9.759087043 | C | 0 | 16.98638 | 0 | 58.51705049 | 0 | 0.1004 | 14.3996354 | 7 7.6599 | Final Load | 178.200343 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 86.63 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | | 739.84 | 71.34 | 1 0 | 112.71 | C | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 194.0 | 2 52.73 3231.27 | 7 | |
| 280 ft | 80.22 | (| | | | | | | | | | | | | | 1 | |
| Volume Season 1 = 7298 | 564.7967703 | C | | 161.1252913 | | | | | 142.2212 | | 3938.716102 | | | 438.204780 | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 2 0 | 99.49530753 | C | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.7171384 | 5 58.557 | | |
| Concentration/Export Coefficient Season 1 | 1.5 | 1.5 | 5 1.5 | 5 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | .1 | _ _ | | |
| Season 2 | 1.2 | 1.2 | | | | 1.2 | 1.2 | | 0 | 0 | 0 | | 1 0 | | 0 0 | - | |
| Wetland Function Factor | -0.9 | | | | | -0.9 471.0142382 | | | | | | | | | | 1 | |
| Load Season 1 * Load Season 2 ** | 1045.04064 382.470823 | 0 | | | | | | | 349.1595 51.92106 | | 12580.98954 732.949883 | | | 884.420514 119.480414 | | Total Load | 21507.3677 |
| Wetland Function Value (Both | 302.410023 | | 010.7221300 | 103.2802504 | | 177.270030 | | | 31.32100 | 0 | 102.343003 | - | 1.7041 | 110.400414 | 20.070 | rotal LUdu | 21301.3011 |
| Seasons) | -1284.760317 | | -3519.457114 | -415.2830195 | 0 | -556.4616968 | | 0 | 80.21611 | 3.014433422 | 2662.787884 | 0.01230381 | 1.7058 | 200.780185 | 7 69.41 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 142.7511463 | C | 391.0507904 | 46.14255772 | 2 0 | 61.82907742 | C | 0 | 73.91467 | 2.809662792 | 2502.373152 | 0.011468011 | 1.5685 | 182.174415 | 1 63.269 | Final Load | 3467.8944 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 83.8 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | | 258.37 | 47.27 | 7 0 | 44.74 | | 0 | 16.58 | 0 | 292.73 | 0 | 0.46 | 41.: | 2 22.92 825.36 | 3 | |
| 280 ft | 80.22 | 0 | 171.72 | 34.25 | 5 0 | 30.89 | C | 0 | 10.89 | 0 | 153.73 | 0 | 0.37 | 25.0 | 6 18.18 525.3 | 1 | |
| Volume Season 1 = 3080 | 377.2380537 | (| | | | | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 2 0 | 99.49530753 | C | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.7171384 | 5 58.557 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | |
| Concentration/Export Coefficient | | | | | | | | | | | _ | _ | _ | | | | |
| Season 2 Wetland Function Factor | 1.2 | 1.2 | | | | -0.9 | 1.2 | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.: | 2 0.2 | | |
| Load Season 1 * | 698.0016846 | -0.9 | | | | | | | 137.1268 | | 2909.737668 | | | 300.107444 | | | |
| Load Season 2 ** | 382.470823 | | | | | | - 0 | | 51.92106 | | 659.6548947 | | | 107.532372 | | Total Load | 9054.18721 |
| Wetland Function Value (Both | 302.470023 | | 010.7221330 | 100.230230- | | 147.270000 | | _ | 31.32100 | | 053.0540347 | | 1.5077 | 107.552572 | 70.01 | Total Load | 3034.10721 |
| Seasons) | -972.4252568 | | -2342,43332 | -440.7156234 | 1 0 | -410.5757479 | | 0 | 37.80958 | 0 | 713.8785126 | | 1.0784 | 81.5279633 | 8 50.732 | | |
| Net Yield | 108.0472508 | C | 260.2703689 | 48.9684026 | 0 | | | 0 | 34.48154 | | 660.260836 | | | 73.6877977 | | Final Load | 1278.325389 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 85.8 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | | 5105.42 | 372.1 | 1 12.56 | 274.41 | 82.98 | 0 | 416.29 | 765.66 | 35842.36 | 24.42 | 7497.1 | 374 | 2 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 | | | | | | | 0 | 2349.318 | 4320.975675 | 202275.1165 | | 42309 | 21117.8473 | 2 994.44 | | |
| Concentration | 1.2 | 1.2 | 2 1.2 | | | 1.2 | | | | | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | | | | 0.2 | 0.2 | | | | | 2 0.2 | | |
| Load | 5737.127004 | (| | | | | | | 4614.735 | | 516995.9557 | | | | | Total Load | 704859.3 |
| Wetland Function Value | -5163.414303 | | | | | | | 0 | 922.947 | 1883.444824 | 103399.1911 | | | 6819.77484 | | | |
| Net Yield | 573.7127004 | C | 4264.894573 | 310.8397097 | 10.49219767 | 229.2327996 | 69.31868 | 0 | 853.3961 | 1755.523549 | 97410.89296 | 55.99075968 | 15369 | 6194.58688 | 6 318.44 | % Net | 127416.3476 81.93 |
| WATERSHED FUNCTION Scenario 5 - Moderate High | | | | | | | | | | | | | | | | Removal | 81.9 |
| Flow (existing conditions) | | | | | | | | | | | 1 | | | | | | |
| | 485.21 | | 2316.24 | 147.63 | 3 0 | 144.21 | 2.05 | n | 90 | 54.48 | 5842.45 | 1.44 | 78.44 | 589 2 | 5 102.57 9853.97 | 7 | |
| | 1692.479084 | | | | | | | | 313.9324 | | 20379.26758 | | | 2055.38488 | | | |
| 290 and below Volume = 34372 | | | | | | | | 1.2 | 6.75 | 9.75 | | | | | | 1 | |
| Volume = 34372 Concentration | 1.2 | 1.2 | 2 1.2 | | | | | | | | | | | | | | |
| Volume = 34372 | | | | | | | | | | | | | | | | | |
| Volume = 34372 Concentration Wetland Function Factor Load | 1.2 -0.9 2505.268469 | -0.9 C | -0.9 11959.36407 | -0.9 762.2530124 | -0.9 4 0 | -0.9 744.5946415 | -0.9 10.5847 | -0.9 | 0.2 710.5492 | 0.2 496.2632972 | 0.2 65632.71826 | 0.2 13.11709156 | 0.2 619.28 | 0.3489.58496 | 2 0.2 7 685.26 | Total Load | 86943.5808 |
| Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value | 1.2 -0.9 2505.268469 -2254.741623 | -0.9 C | -0.9 11959.36407 -10763.42766 | 7 762.2530124 6 -686.0277112 | -0.9 4 0 2 0 | -0.9 744.5946415 -670.1351773 | -0.9 10.5847 -9.52623 | -0.9 0 | 0.2 710.5492 142.1098 | 0.2 496.2632972 99.25265943 | 0.2 65632.71826 13126.54365 | 0.2 13.11709156 2.623418311 | 0.2 619.28 123.86 | 0.3 3489.58496 6 697.916993 | 2 0.2 7 685.26 4 137.05 | | |
| Volume = 34372 Concentration Wetland Function Factor Load | 1.2 -0.9 2505.268469 | -0.9 C | -0.9 11959.36407 -10763.42766 | 7 762.2530124 6 -686.0277112 | -0.9 4 0 2 0 | -0.9 744.5946415 -670.1351773 | -0.9 10.5847 -9.52623 | -0.9 0 | 0.2 710.5492 | 0.2 496.2632972 99.25265943 | 0.2 65632.71826 | 0.2 13.11709156 2.623418311 | 0.2 619.28 123.86 | 0.3489.58496 | 2 0.2 7 685.26 4 137.05 | Total Load Final Load Net | 86943.5808 15229.6293 |

Table C21. High Watershed Functions for Nitrogen - St. Johns Bayou.

| on comic Dayon Zom Hote | ention Scenario | - Nitrogen | | | | | | | | | | | | | | | + | |
|---|-------------------------------------|----------------------|-----------------------------|-----------------------------|-------------|-----------------------------|---------------------|------------|----------------------|----------------------------|----------------------------|----------------------------|------------------|--------------------------|---------------------|------------------|------------------|----------------------------|
| Contour Range C | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 4 | 1 Pasture | LC Total | -+ | |
| Scenario 1 - Existing | , p. 1000 | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | | | 21.29 | 0 | 8.95 | 0 | | | 0 | | 0 | | | | 109.28 | | |
| Volume = 644 | 90.28257687 | | | | | 52.74341142 | | | 39.89641 | | 108.5512445 | | | 40.1321376 | | | | |
| Concentration/Export Coefficient | 1.5 | | | | | 1.5 | | | | 9.75 | | | 6.75 | 1.87 | | | | |
| Wetland Function Factor | -0.1 | | | | | -0.1 | | | | 1 | 1 | | 1 | | 1 1 | | | |
| Load | 167.0494006 | | | | | 97.59087043 | | | 92.31391 | 0 | | | | 79.4238067 | | | Total Load | 1332.308723 |
| Wetland Function Value | -16.70494006 | | | -23.21463275 | | -9.759087043 | | | 92.31391 | 0 | | | | 79.4238067 | | | | |
| Net Yield | 150.3444605 | (| 277.7250804 | 208.9316948 | 0 | 87.83178339 | 0 | 0 | 84.9319 | 0 | 292.5852525 | 0 | 0.5018 | 71.9981773 | 38.3 | | Final Load | 1213.149725 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 8.94 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | (| 739.84 | 71.34 | 0 | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 194.0 | 2 52.73 | 3231.27 | | |
| 280 ft | 80.22 | | 171.72 | 34.25 | 0 | 30.89 | 0 | 0 | 10.89 | 0 | 153.73 | 0 | | 25.0 | | 525.31 | | |
| Volume Season 1 = 7298 | 564.7967703 | (| 1670.969099 | 161.1252913 | 0 | 254.5616987 | 0 | 0 | 142.2212 | 5.533458981 | 3938.716102 | 0.022585547 | 2.7554 | 438.204780 | 119.09 |) | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.7171384 | 58.557 | 1 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 75 3.75 | 5 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 2 | 1.2 | | | | | 1.2 | | 1.2 | 0 | 0 | 0 | 0 | 0 | | 0 0 | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | -0.1 | 1 | | 1 | 1 | 1 | | 1 1 | | | |
| Load Season 1 * | 1045.04064 | | | | | 471.0142382 | | | 349.1595 | | 12580.98954 | | | | | | | |
| Load Season 2 ** | 382.470823 | (| 818.7221356 | 163.2962564 | 0 | 147.276536 | 0 | 0 | 51.92106 | 0 | 732.949883 | 0 | 1.7641 | 119.480414 | 2 86.678 | 3 | Total Load | 21507.36771 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | | |
| Seasons) | -142.7511463 | (| -391.0507904 | -46.14255772 | 0 | -61.82907742 | 0 | 0 | 401.0806 | 15.07216711 | 13313.93942 | 0.061519049 | 8.5288 | 1003.90092 | 8 347.05 | i i | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | | |
| Net Yield | 1284.760317 | | 3519.457114 | 415.2830195 | . 0 | 556.4616968 | 0 | 0 | 369.5734 | 14.04831396 | 12511.86576 | 0.057340057 | 7.8426 | 910.872075 | 7 316.34 | | Final Load | 19906.56649 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 7.44 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | 404.00 | | 258.37 | 47.27 | | 44.74 | | | 40.50 | | 000 70 | | 0.40 | | 0 00 00 | 005.00 | + | |
| 282 ft 280 ft | 101.09 | | | | | 30.89 | | | 16.58 10.89 | | | | | 41 25.0 | | 825.36 525.31 | + | |
| Volume Season 1 = 3080 | 377.2380537 | | | | | 166.9564796 | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | | |
| Volume Season 2 = 1692 | 258.3850298 | | | | | 99.49530753 | 0 | | 35.0762 | | 495.1574499 | | | 80.7171384 | | | + | |
| Concentration/Export Coefficient | 256.3650296 | | 553.1024348 | 110.3177172 | U | 99.49530753 | U | U | 35.0762 | U | 495.1574499 | U | 1.1916 | 60.7171364 | 50.557 | | + | |
| Season 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 6.75 | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 5 3.75 | | | |
| Concentration/Export Coefficient | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 0.75 | 3.73 | 13 | 3.73 | 0.73 | 1.01 | 3 3.73 | 1 | + | |
| Season 2 | 1.2 | 1.5 | 1.2 | 1.3 | 1 2 | 1.2 | 1.2 | 1.2 | ٥ | 0 | | 0 | 0 | | 0 0 | | | |
| Wetland Function Factor | -0.1 | | | | | -0.1 | | | 1 | 1 | 1 | 1 | 1 | | 1 1 | | + | |
| Load Season 1 * | 698.0016846 | | | | | 308.9187394 | | -0.1 | 137.1268 | | 2909.737668 | | | 300.107444 | 12 175 65 | | + | |
| Load Season 2 ** | 382.470823 | | | | | 147.276536 | | | 51.92106 | | | | | 119.480414 | | | Total Load | 9148.274462 |
| Wetland Function Value (Both | 302.470023 | | 010.7221330 | 100.230230- | | 147.270000 | - 0 | - 0 | 31.32100 | | 732.343003 | | 1.7041 | 113.400414 | 12 00.070 | | Otal Load | 3140.274402 |
| Seasons) | -108.0472508 | | -260.2703689 | -48.9684026 | اه | -45.61952755 | ٥ | 0 | 189.0479 | 0 | 3642.687551 | 0 | 5 5686 | 419.587858 | 3 262 33 | | | |
| Net Yield | 972.4252568 | | | | | 410.5757479 | | | 172.4077 | | 3367.269669 | | | 379.192226 | | | Final Load | 8327.92767 |
| THE TIOL | 072.1202000 | | 2012.10002 | 110.710020 | | 110.0101110 | _ | | 172.1077 | | 0001.200000 | | 0.07 10 | O/ O. TOLLEL | 207.00 | | % Net | 0027.02707 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 8.97 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | T | |
| (existing conditions) | | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | | | | | 274.41 | | 0 | | | | | 7497.1 | | | 54998.3 | | |
| Volume = 310381 | 3875.819129 | | | 2099.933454 | | 1548.623325 | | | 2349.318 | | | | | 21117.8473 | | | | |
| Concentration | 1.2 | | | | | 1.2 | | 1.2 | | 9.75 | 15 | 9.75 | 6.75 | 1.87 | 75 3.75 | 5 | | |
| Wetland Function Factor | -0.1 | | | | | -0.1 | | -0.1 | | 1 | 1 | 1 | 1 | | 1 1 | | | |
| Load | 5737.127004 | | | | | 2292.327996 | | | 4614.735 | | 516995.9557 | | | 34098.8742 | | | Total Load | 704859.38 |
| Wetland Function Value | -573.7127004 | | | | | -229.2327996 | | | 4614.735 | | 516995.9557 | 300.3534375 | | | | | | |
| Net Yield | 5163.414303 | (| 38384.05115 | 2797.557387 | 94.42977904 | 2063.095196 | 623.8681 | 0 | 4266.981 | 8777.617744 | 487054.4648 | 279.9537984 | 76845 | 30972.9344 | 1592.2 | | Final Load | 658915.7004 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 6.52 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | | |
| 290 and below | 485.21 | | 2316.24 | 147.63 | 0 | 144.21 | 2.05 | 0 | 90 | 54.48 | 5842.45 | 1.44 | 78.44 | 580 1 | 5 102.57 | 9853 97 | | |
| LOO GITG DOTOW | 1692,479084 | | | 514.953705 | | 503.0242755 | | | 313.9324 | | 20379.26758 | | | 2055.38488 | | | | |
| Volume = 34372 | 1.2 | | | | | 1.2 | | 1.2 | | | | | | 1.87 | | | | |
| | | | | | | | | | | | | | | | J 3./5 | | | |
| Concentration | | _ ^ 4 | | | | | | | | | | | | | | | | |
| Volume = 34372 Concentration Wetland Function Factor | -0.1 | | | | | -0.1 | | | | | 65600 71006 | | | | 1 1 | | otal Load | 06043 50005 |
| Concentration Wetland Function Factor Load | -0.1 2505.268469 | (| 11959.36407 | 762.2530124 | 0 | 744.5946415 | 10.5847 | 0 | 710.5492 | 496.2632972 | 65632.71826 | 13.11709156 | 619.28 | 3489.58496 | 685.26 | 3 | Total Load | 86943.58085 |
| Concentration Wetland Function Factor Load Wetland Function Value | -0.1 2505.268469 -250.5268469 | 0 | 11959.36407 -1195.936407 | 762.2530124 -76.22530124 | 0 | 744.5946415 -74.45946415 | 10.5847 -1.05847 | 0 | 710.5492 710.5492 | 496.2632972 496.2632972 | 65632.71826 65632.71826 | 13.11709156 13.11709156 | 619.28 619.28 | 3489.58496 3489.58496 | 685.26 67 685.26 | i - | | |
| Concentration Wetland Function Factor Load | -0.1 2505.268469 | 0 | 11959.36407 -1195.936407 | 762.2530124 -76.22530124 | 0 | 744.5946415 | 10.5847 -1.05847 | 0 | 710.5492 | 496.2632972 496.2632972 | 65632.71826 | 13.11709156 13.11709156 | 619.28 619.28 | 3489.58496 | 685.26 67 685.26 | 6 6 | Final Load Net | 86943.58085 82540.97269 |

Table C22. Low Watershed Functions for Nitrogen- St. Johns Bayou.

| St. Johns Bayou - Expecte | ed Concentration | ns Runoff Coeffici | ients and Function | Factors - Phosph | orus | | | | | | | | | | | | |
|---|---------------------|----------------------|--------------------|------------------|-------------|---------------------|-----------|------------|-----------|--------------------|----------------|-----------------|--------|---------------|------------------|------------------|-------------|
| • | | | | | | | | | | | | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | | | | | | | | | | | | | | 1 3.38 109.28 | 3 | |
| Volume = 644 | 90.28257687 | | | | | | | | 39.89641 | | 108.5512445 | | | 40.1321376 | | | |
| Concentration/Export Coefficient | 0.21 | | | | | 0.21 | | | | | | 0.5 | 1.1 | 1 0. | 1 0.04 | | |
| Wetland Function Factor | -0.4 | | | | | -0.2 | | | | | | | | | | | |
| Load | 23.38691608 | | | | | | | | 13.34862 | | 36.31928689 | | 0.0789 | | | Total Load | 178.3845524 |
| Wetland Function Value | -9.354766432 | 2 (| | -16.25024293 | | | | | 13.34862 | | 36.31928689 | | 0.0789 | | | | |
| Net Yield | 14.03214965 | i (| 25.92100751 | 16.25024293 | 0 | 10.93017749 | 0 | 0 | 12.31514 | 1 (| 33.50736134 | 1 0 | 0.0728 | 9.63189369 | 3 4.6985 | Final Load | 127.3592476 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 28.60 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | | 739.84 | 71.34 | 0 | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 194.0 | 2 52.73 3231.27 | 7 | |
| 280 ft | 80.22 | | | 34.25 | | | | | | | | | | | | | |
| Volume Season 1 = 7298 | 564.7967703 | | | 161.1252913 | | | | | 142.2212 | | 3938.716102 | | | 438.204780 | 2 119.09 | | |
| Volume Season 2 = 1692 | 258.3850298 | | | 110.3177172 | | | | | | | 495.1574499 | | | 80.7171384 | | | |
| Concentration/Export Coefficient | 230.3030230 | 1 | 333.1024040 | 110.5177172 | | 33.43330730 | , , | - | 33.0702 | | 1 400.1074400 | , , | 1.1310 | 00.7171304 | 3 30.337 | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | | , | ء ا | | | | | | |
| | | | | | | | | | | | | 0 | | , , | 1 1 | + + | |
| Wetland Function Factor | -0.4 146.3056896 | | | -0.5 | | -0.2 65.94199335 | | | | | 1 4400 4500 47 | 0.000000000 | 0.0055 | 117.439130 | | + + | |
| Load Season 1 * | | | | | | | | | 50.85734 | | 1408.458347 | | | | | Total I as 1 | 0040 0400 1 |
| Load Season 2 ** | 47.80885287 | (| 102.340267 | 20.41203205 | 0 | 18.40956701 | - 0 | 0 | 6.490132 | (| 91.61873537 | 0 | 0.2205 | 14.9350517 | 1 10.835 | Total Load | 2610.610942 |
| Wetland Function Value (Both Seasons) | -77.64581699 | , | -214.0761098 | -31.07506848 | 0 | -16.87031207 | | | 57.34747 | 4 004075 : | 1500.077082 | 0.000000 | | 132.374182 | 40.440 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | -77.04361695 | | -214.0761096 | -31.0/300046 | 0 | -16.87031207 | | 0 | 57.34747 | 1.001273130 | 1500.077082 | 0.006662339 | 1.2050 | 132.374162 | 4 42.112 | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 116.4687255 | i (| 321.1141647 | 31.07506848 | 0 | 67.48124828 | 0 | 0 | 53.01434 | 1.537933717 | 1388.886195 | 0.00627728 | 1.1124 | 119.529363 | 6 37.943 | Final Load | 2138.168954 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 18.10 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | | | 47.27 | | 44.74 | | | | | | | | | | | |
| 280 ft | 80.22 | | | | | | | | | | | | 0.37 | | | 1 | |
| Volume Season 1 = 3080 | 377.2380537 | ' (| | 176.3976931 | | | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | |
| Volume Season 2 = 1692 | 258.3850298 | 3 | 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | 2 | 495.1574499 | 9 0 | 1.1918 | 80.7171384 | 5 58.557 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 1 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | . 0 |) (| | 0 |) (|) (| 0 0 | | |
| Wetland Function Factor | -0.4 | | | | | -0.2 | | | | | 1 | 1 1 | | í | 1 1 | | |
| Load Season 1 * | 97.72023584 | | | | | | | | 19.71778 | | 348.1293581 | | 0.5471 | | | | |
| Load Season 2 ** | 47.80885287 | | | 20.41203205 | | | | | 6.490132 | | 91.61873537 | | 0.2205 | | | Total Load | 1180.88647 |
| Wetland Function Value (Both | 47.00000207 | | 102.340207 | 20.41203200 | , , | 10.40330701 | | - | 0.430132 | | 31.01073337 | | 0.2200 | 14.3330317 | 10.000 | Total Load | 1100.00047 |
| Seasons) | -58.21163548 | ا ا | -140.8390738 | -33.0531599 | | -12.3316381 | | | 26.20791 | | 439,7480934 | | 0.7676 | 55.595360 | 7 22 176 | | |
| Net Yield | 87.31745323 | , | | | | | 2 0 | | 23.95616 | | 402.2890148 | | | 50.1191928 | | Final Load | 887.8983792 |
| WATERSHED FUNCTION | 67.31743323 | | 211.2360107 | 33.0031395 | | 49.32033242 | | | 23.93010 | | 402.2690146 | , , | 0.70 | 30.1191926 | 3 29.011 | % Net Removal | 24.81 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | |
| (existing conditions) | | | | | | | | | | | | | | 1 | | | |
| 300 and below | 686.78 | | 5105.42 | 372.1 | 12.56 | 274.41 | 82.98 | 0 | 416.29 | 765.66 | 35842.36 | 24.42 | 7497. | 374 | 2 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 | | | 2099.933454 | | | | | 2349.318 | | 202275.1165 | | | 21117.8473 | | | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | | | | | | | | | 1 | |
| Wetland Function Factor | -0.4 | | | | | -0.2 | | | | 1 | 1 | 1 | 1 | 1 | 1 1 | 1 | |
| Load | 717.1408755 | | | | | | | | 620.013 | 954.4392696 | 53382.80707 | 30.44093588 | 11166 | 4058.8634 | 7 186.85 | Total Load | 77222.49726 |
| Wetland Function Value | -286.8563502 | | | -194.2748185 | | | | | 620.013 | | 53382.80707 | | | | | . Star Lodd | |
| Net Yield | 430.2845253 | | | | | | | | 576.5437 | | 49640.1207 | | | | | Final Load | 69454.99113 |
| WATERSHED FUNCTION | 100.2010200 | | 0100.07000 | 104.2740100 | 11.00072200 | 220.2027000 | 01.00001 | | 010.0101 | 074.4004720 | 10010.1201 | 27.0000000 | 1000 | 0000:12000 | 100.10 | % Net Removal | 10.06 |
| Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | |
| Flow (existing conditions) | | | <u> </u> | | | | | | | | | | | | | | |
| 290 and below | 485.21 | (| | | | 144.21 | | | | | | | | | 5 102.57 9853.97 | 7 | |
| Volume = 34372 | 1692.479084 | (| 8079.363067 | 514.953705 | 0 | 503.0242755 | 7.150681 | 0 | 313.9324 | 190.0337184 | 20379.26758 | | 273.61 | 2055.38488 | 5 357.78 | | |
| Concentration | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | | | | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Wetland Function Factor | -0.4 | | | | | -0.2 | | | | | | | | | 1 1 | | |
| Load | 313.1585587 | | | 95.28162655 | | | | | 98.15205 | | 6371.649158 | | | 404.153785 | | Total Load | 9004.66470 |
| Wetland Function Value | -125.2634235 | i 0 | | -47.64081328 | 0 | | | | 98.15205 | | 6371.649158 | | | 404.153785 | | 7 2230 | |
| Net Yield | 187.8951352 | | | 47.64081328 | 1 0 | 74.45946415 | | | 92.34337 | | 5994.572589 | | | 366.123101 | | Final Load | 7846.300511 |
| | 107.0001002 | | 300.0023031 | 47.04301320 | | . 1.10010410 | 5.7 00002 | | 32.0.007 | **E.0000073 | 2301.072000 | 1.12133313 | 55.702 | 300.120101 | . 51,24 | % Net | |
| WATERSHED FUNCTION | | | | | | | | | 1 | | | | 1 | 1 | | Removal | 12.86 |

Table C23. Expected Watershed Functions for Phosphorus- St. Johns Bayou.

| Volume Season 2 = 1692 | 0 0.04 0 0.2357 0.5 1.1 0.2 0.2 0 0.0789 0 0.0158 0 0.0146 0.01 1.22 0 0 0.37 22585347 2.7554 0 1.1918 0.5 1.1 0 0 0.2 | 6.81 40.13213763 1 0.1 0.2 10.6714818 2 2.134296361 1 1.926378739 0 194.02 2.5.06 438.2047802 1 80.71713845 0 0.1 | 3.38 109.2 3.38 109.299 0.04 0.2 2.2145 1.0429 0.9397 52.73 3231.2 18.18 525.7 3231.2 19.09 8.557 0.04 | Total Load Final Load % Net Removal | 178.384552- 23.3203143 86.9: |
|--|---|--|---|-------------------------------------|------------------------------------|
| Scenario 1 - Existing | 0 0.04 0 0.2357 0.5 1.1 0.2 0.2 0 0.0789 0 0.0758 0 0.0146 0 0.01 1.22 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0 0.2 0.2 0.2 0.2 0.2 0.2 0.2 | 6.81 40.13213763 1 0.1 0.2 10.6714818 2 2.134296361 1 1.926378739 0 194.02 2.5.06 438.2047802 1 80.71713845 0 0.1 | 3.38 109.2 19.919 0.04 0.2 5.2145 0.0429 0.9397 552.73 3231.2 18.18 525.3 119.09 88.557 | Total Load Final Load % Net Removal | 23.3203143 |
| 175 ft | 0 02357 0.5 1.1 0.2 0.2 0 0.0789 0 0.0158 0 0.0146 0 0.0146 0 0.37 22585547 2.7554 0 1.1918 0 5 1.1 0 0 0.02 0.2 0.2 0.2 | 40.13213763 1 0.2 10.6714818 2 2.134298361 1 1.926378739 0 1.926378739 0 1.94.02 25.06 438.2047802 1 80.71713845 5 | 9.919 0.04 0.2 0.2 5.2145 0.0429 0.9397 52.73 3231.2 18.18 525.3 19.09 58.557 | Total Load Final Load % Net Removal | 23.320314 |
| Volume = 644 90.2827887 0 166.7752562 125.4464949 0 82.74341142 0 0 39.89641 0 108.5512445 | 0 02357 0.5 1.1 0.2 0.2 0 0.0789 0 0.0158 0 0.0146 0 0.0146 0 0.37 22585547 2.7554 0 1.1918 0 5 1.1 0 0 0.02 0.2 0.2 0.2 | 40.13213763 1 0.2 10.6714818 2 2.134298361 1 1.926378739 0 1.926378739 0 1.94.02 25.06 438.2047802 1 80.71713845 5 | 9.919 0.04 0.2 0.2 5.2145 0.0429 0.9397 52.73 3231.2 18.18 525.3 19.09 58.557 | Total Load Final Load % Net Removal | 23.320314 |
| OzerostrationExport Coefficient | 0.5 1.1 0.2 0.2 0.0789 0.0158 0.0146 0.0146 0.01 1.22 0.037 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.02 0.2 0.2 0.2 0.2 | 0.1 0.2 10.6714818 5 2.134296361 1 1.926378739 0 194.02 25.06 438.2047802 1 80.71713845 5 0.1 | 0.04 0.2 5.2145 0.0429 0.9397 52.73 3231.2 18.18 525.3 19.09 88.557 | Final Load % Net Removal | 23.3203143 |
| Welland Function Factor 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.0 0.0 | 0.2 0.2 0.2 0.0789 0 0.0789 0 0.0158 0 0.0158 0 0.0158 0 0.0146 0 0.0146 0 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0 | 0.2 10.6714818 | 0.2 5.2145 0.0429 0.9397 52.73 3231.2 18.18 525.3 19.09 88.557 | Final Load % Net Removal | 23.3203143 |
| Load 23,38691608 0 43,20167918 32,50048586 0 13,66272186 0 0 13,34862 0 36,31926869 Methal Function Value 2-10,4822447 0 3-3,881911512 2-29,55043727 0 12,29644967 0 0 2,668724 0 7,263857379 Met Yield 2,338691608 0 4,320167918 3,250048586 0 1,366272186 0 0 2,463028 0 6,701472269 MATERSHED FUNCTION | 0 0.0789 0 0.0158 0 0.0158 0 0.0146 0 0.146 0 0.37 22585547 2.758 0 1.1918 0.5 1.1 0 0 0.2 0.2 | 194.02 25.06 438.2047802 10.1 194.02 25.06 438.2047802 10.1 10.1 | 52.145 .0429 .9397 52.73 3231.2 18.18 525.3 19.09 88.557 | Final Load % Net Removal | 23.3203143 |
| Wetland Function Value -21.04822447 0 -38.88151126 -29.25043727 0 -12.29644967 0 0 2.689724 0 7.263857379 | 0 0.0158 0 0.0146 0 0.01 1.22 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 | 2.134296361 1 1.926378739 0 1 1.926378739 0 1.926378739 0 25.06 438.2047802 1 80.71713845 5 | 52.73 3231.2 18.18 525.3 19.09 | Final Load % Net Removal | 23.3203143 |
| Net Yield 2.338691608 0 4.320167918 3.250048596 0 1.366272196 0 0 2.463028 0 6.701472269 WATERSHED FUNCTION Scenario 2 - Authorized Project (2 seasons) 285 ft 250.07 0 739.84 71.34 0 112.71 0 0 62.97 2.45 1743.91 280 1 280 1 30.89 0 0 10.89 0 0 153.73 10.00 10. | 0 0.0146 0.01 1.22 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 0.20 0.9853 | 194.02 25.06 438.2047802 80.71713845 0.1 | 52.73 3231.2 18.18 525.3 19.09 88.557 | % Net Removal | |
| ### WATERSHED FUNCTION Scenario 2 - Authorized Project | 0.01 1.22 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 0.26862339 0.9853 | 194.02 25.06 438.2047802 1 80.71713845 5 0.1 | 52.73 3231.2 18.18 525.3 119.09 38.557 | % Net Removal | |
| Scenario 2 - Authorized Project (2 seasons) 285 ft 250.07 0 739.84 71.34 0 112.71 0 0 62.97 2.45 1743.91 286 ft 250.07 0 171.72 34.25 0 30.89 0 0 10.89 0 153.73 volume Season 1 = 7298 564.7967703 0 1670.996099 161.1252913 0 254.5616987 0 0 142.2212 5.533459981 3938.716102 0.022 volume Season 2 = 1692 258.3850298 0 553.102.4348 110.3177172 0 99.49530753 0 0 35.0762 0 495.1574499 Concentration/Export Coefficient Season 1 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0. | 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 25.06 438.2047802 1 80.71713845 5 0.1 | 18.18 525.3 19.09 8.557 | Removal | 86.9 |
| | 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 25.06 438.2047802 1 80.71713845 5 0.1 | 18.18 525.3 19.09 8.557 | | |
| 285 ft 250.07 0 739.84 71.34 0 112.71 0 0 62.97 2.45 1743.91 280 ft 80.22 0 171.72 34.25 0 30.89 0 0 10.89 0 153.73 Volume Season 1 = 7298 564.7967703 0 1670.999099 161.1252913 0 254.5616987 0 0 142.2212 5.533459981 3938.716102 0.022 Volume Season 2 = 1692 258.3850298 0 553.1024348 110.3177172 0 99.49530753 0 0 35.0762 0 495.1574499 Concentration/Export Coefficient Season 1 0.21 | 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 25.06 438.2047802 1 80.71713845 5 0.1 | 18.18 525.3 19.09 8.557 | | |
| 280 ft 80.22 0 171.72 34.25 0 30.89 0 0 10.88 0 153.73 | 0 0.37 22585547 2.7554 0 1.1918 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 25.06 438.2047802 1 80.71713845 5 0.1 | 19.09 58.557 | 31 | |
| Volume Season 2 = 1692 | 0 1.1918 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 80.71713845 5 0.1 | 8.557 | | |
| Concentration/Export Coefficient Season 1 0.2 | 0.5 1.1 0 0 0.2 0.2 06862339 0.9853 | 0.1 | | | |
| Season 1 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.21 0.11 0.5 1.1 Concentration/Export Coefficient Season 2 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.01 0 | 0 0 0.2 0.2 06862339 0.9853 | 0 | 0.04 | | |
| Concentration/Export Coefficient Season 2 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 | 0 0 0.2 0.2 06862339 0.9853 | 0 | 0.04 | 1 | |
| Season 2 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0 0 0 Welland Function Factor -0.9 | 0.2 0.2 06862339 0.9853 | 0 | | | |
| Wetland Function Factor 0.9 | 0.2 0.2 06862339 0.9853 | 0 | _ | | |
| Load Season 1 * 146.3056896 0 432.8500076 41.73810492 0 65.94199335 0 0 50.85734 1.681273158 1408.458347 0.006 Load Season 2 ** 47.80885287 0 102.340267 20.41203205 0 18.40956701 0 0 6.490132 0 91.61873537 | 06862339 0.9853 | | 0 2 | | |
| Load Season 2 ** 47.80885287 0 102.340267 20.41203205 0 18.40956701 0 0 6.490132 0 91.61873537 | | | 0.2 | + | |
| | 0 0.2205 | 117.4391306 3 | | Total I and | 0040 040040 |
| | | 14.93505177 1 | 0.635 | Total Load | 2610.610942 |
| Wetland Function Value (Both 174,7030882 0 481.6712471 -55.93512327 0 -75.91640432 0 0 11.46949 0.336254632 300.0154164 0.001 | 01372468 0.2412 | 26 47483649 | 1223 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers s | 51372400 0.2412 | 20.47403040 | .4225 | | |
| ** No Export for upland and ag land covers | | | | | |
| Net Yield 19.41145425 0 53.51902746 6.215013697 0 8.435156035 0 0 10.60287 0.307586743 277.7772389 0.001 | 01255456 0.2225 | 23.90587272 7 | 7.5886 | Final Load | 407.9866008 |
| WATERSHED FUNCTION | | | | % Net Removal | 84.37 |
| Scenario 3 - Avoid and | | | | | |
| Minimize (2 seasons) | | | | | |
| 282 ft 101.09 0 258.37 47.27 0 44.74 0 0 16.58 0 292.73 | 0 0.46 | | 22.92 825.3 | | |
| 280 ft 80.22 0 171.72 34.25 0 30.89 0 0 10.89 0 153.73 | 0 0.37 | | 18.18 525.3 | 31 | |
| Volume Season 1 = 3080 377.2380537 0 964.1606087 176.3976931 0 166.9564796 0 0 61.87167 0 1092.381991 | | 153.7462441 8 | | | |
| Volume Season 2 = 1692 258.3850298 0 553.1024348 110.3177172 0 99.49530753 0 0 35.0762 0 495.1574499 | 0 1.1918 | 80.71713845 5 | 8.557 | | |
| Concentration/Export Coefficient | | | | | |
| Season 1 0.2 | 0.5 1.1 | 0.1 | 0.04 | | |
| | | | 0 | | |
| | 0.2 0.2 | 0.2 | 0.2 | | |
| | | | | | |
| | | | 22.341 | Total Load | 4400 000 47 |
| Load Season 2 ** 47.80885287 0 102.340267 20.41203205 0 18.40956701 0 0 6.490132 0 91.61873537 Wetland Function Value (Bdh | 0 0.2205 | 14.93505177 1 | 0.835 | Total Load | 1180.88647 |
| Wetsian runcion value (but) Seasons) -130.9761798 0 -316.887916 -59.49568781 0 -55.49237147 0 0 5.241582 0 87.94961869 | 0 04505 | 11.11907214 6 | | | |
| Selsotinis -130.9761799 | | 10.02383857 5 | | Final Load | 163.9276489 |
| Net field 14.5529067 U 35.20970644 0.610031979 U 0.105619052 U 0 4.791233 U 60.45760296 | 0 0.1402 | 10.02363657 5 | 0.9754 | % Net | 103.9270469 |
| WATERSHED FUNCTION | | | | Removal | 86.12 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | |
| Constitution Cons | 24.42 7497.1 | 3742 1 | 76.21 54998 | 3 | |
| | | | 94.44 | | |
| Concentration 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 | 0.5 1.1 | | 0.04 | | |
| Odried Marchion Factor 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.0 0.9 0.9 | 0.2 0.2 | | 0.04 | | |
| | 44093588 11166 | | 186.85 | Total Load | 77222.49726 |
| | 88187176 2233.2 | | 37.37 | | |
| Net Yield 71.71408755 0 533.1118216 38.85496371 1.311524709 28.65409995 8.664834 0 115.3087 174.8976946 9928.02414 5.578 | 78196198 2076.6 | 733.6241994 | 33.69 | Final Load | 13750.0584 |
| WATERSHED FUNCTION | | | | % Net Removal | 82.19 |
| Scenario 5 - Moderate High | | | | | |
| Flow (existing conditions) | | | | | |
| 290 and below 485.21 0 2316.24 147.63 0 144.21 2.05 0 90 54.48 5842.45 | 1.44 78.44 | | 02.57 9853.9 | 37 | |
| | | 2055.384885 3 | | | |
| Concentration 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 1.1 0.5 1.1 | 0.5 1.1 | | 0.04 | | |
| Wetland Function Factor -0.9 -0.9 -0.9 -0.9 -0.9 -0.9 -0.9 0.2 0.2 0.2 | 0.2 0.2 | | 0.2 | | |
| | 20771944 85.545 | | 67.86 | Total Load | 9004.664706 |
| | 44154389 17.109 | | 3.572 | | |
| Net Yield 31.31585587 0 149.4920509 9.528162655 0 9.307433018 0.132309 0 18.46867 8.533937501 1198.914518 0.22 | 22556663 16.096 | 73.22462028 1 | 2.248 | Final Load | 1527.487599 |
| | | | | % Net | |
| WATERSHED FUNCTION | | | | Removal | 83.0 |

Table C24. High Watershed Functions for Phosphorus - St. Johns Bayou.

| St. Johns Bayou - Low Ret | tention Scenario | o - Phosphorus | | | | | | | | | | | | | | | |
|---|-------------------------------------|--------------------------|---------------------------------------|-----------------------------|-------------|-----------------------------|----------------------|-------------|----------------------|--------------------------|-------------------------------------|----------------------------|------------------|----------------------------|--------------------|---------------------|--------------------------|
| Contour Range | Cuproso/Tupolo 16 | Scrub/shrub marsh 19 | DI U 42 | Riparian 43 | River 45 | Onon water 24 | March 20 | Condhor 21 | Cotton 26 | Cotton/soybeans 37 | Coulonna 20 | Sautoana/sam 20 | Com 40 | Horb Vog 41 | Booture I C Total | | |
| Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/Stirub ItiaiSti 19 | DLIT 42 | Niparian 43 | Kivei 43 | Open water 24 | IVIAISII 29 | Sariubai 31 | CULLUIT 30 | Collor/Soybearis 37 | Suybeans 36 | Suybeans/com 39 | COIII 40 | neib. veg. 41 | rasiule LC Total | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | 2 | 28.3 | 21.29 | 0 | 8.95 | 0 | 0 | 6.77 | 0 | 18.42 | | 0.04 | 6.8 | 1 3.38 109.28 | | |
| Volume = 644 | 90.28257687 | | | | | | | | 39.89641 | | 108.5512445 | | | 40.13213763 | | 1 | |
| Concentration/Export Coefficient | 0.21 | | | | | 0.21 | 0.21 | | | 0.5 | | | | | | | |
| | -0.1 | | | | | | | | | | | | | | | | |
| Wetland Function Factor | | -0. | | | | -0.1 | | | 10.04000 | 1 | | | | | | T | 170 00 1550 |
| Load | 23.38691608 | | | | | 13.66272186 | | | 13.34862 | | 36.31928689 | | 0.0789 | | | Total Load | 178.3845524 |
| Wetland Function Value | -2.338691608 | 3 (| | | | -1.366272186 | | | 13.34862 | | 36.31928689 | | 0.0789 | | | | |
| Net Yield | 21.04822447 | ' (| 38.88151126 | 29.25043727 | 0 | 12.29644967 | 0 | 0 | 12.31514 | 0 | 33.50736134 | 0 | 0.0728 | 9.631893693 | 3 4.6985 | Final Load | 161.7022927 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.35 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | , | 739.84 | 71.34 | . 0 | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 194.02 | 2 52.73 3231.27 | | |
| 280 ft | 80.22 | | | | | 30.89 | 0 | | | 2.43 | | | | | | | |
| Volume Season 1 = 7298 | 564.7967703 | | | | | 254.5616987 | 0 | | 142.2212 | | 3938.716102 | | | 438.2047802 | 2 119.09 | | |
| | | | | | | | | | | | | | | | | | |
| Volume Season 2 = 1692 | 258.3850298 | 3 (| 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.71713845 | 58.557 | | |
| Concentration/Export Coefficient Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0. | 1 0.04 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | 1 | 1 1 | | |
| Season 2 | 0.15 | 0.15 | | | | 0.15 | 0.15 | 0.15 | 0 | 0 | 0 | 0 | |)(| 0 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 1 | | |
| Load Season 1 * | 146.3056896 | . (| | 41.73810492 | | 65.94199335 | 0 | | 50.85734 | 1.681273158 | 1408.458347 | 0.006862339 | 0.9853 | 117.4391306 | 31.277 | | |
| Load Season 2 ** | 47.80885287 | | 102.340267 | | | 18.40956701 | 0 | | 6.490132 | | 91.61873537 | | | 14.9350517 | | Total Load | 2610.610942 |
| Wetland Function Value (Both | -11.00000201 | <u> </u> | | 20200200 | | .5.10000701 | | | 2.100102 | | 2 0 . 0 . 0 . 0 . 0 . 0 . 0 . 0 . 0 | | 0.2200 | | | . Jun Louis | 2010.010042 |
| Seasons) | -19.41145425 | | -53.51902746 | -6.215013697 | | -8.435156035 | _ | | 57.34747 | 4 604070450 | 1500.077082 | 0.000000000 | 1 2055 | 132.3741824 | 42 112 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | *19.41140423 | | 53.31302740 | *6.213013097 | 0 | *8.430130033 | 0 | 0 | 37.34747 | 1.061273136 | 1300.077082 | 0.000802338 | 1.2036 | 132.374102 | 4 42.112 | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 174.7030882 | 2 | 481.6712471 | 55.93512327 | 0 | 75.91640432 | 0 | 0 | 53.01434 | 1.537933717 | 1388.886195 | 0.00627728 | 1.1124 | 119.5293636 | 37.943 | Final Load | 2390.25561 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 8.44 |
| Scenario 3 - Avoid and Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 |) | 258.37 | 47.27 | | 44.74 | 0 | 0 | 16.58 | 0 | 292.73 | | 0.46 | 41.3 | 2 22.92 825.36 | | |
| 280 ft | 80.22 | | | | | 30.89 | | | | 0 | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Volume Season 1 = 3080 | 377.2380537 | | 964.1606087 | | | 166.9564796 | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | . 0 | 99.49530753 | 0 | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.71713845 | 58.557 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 1.1 | 0.5 | 1.1 | 0.5 | 1.1 | 0.1 | 1 0.04 | | |
| Concentration/Export Coefficient | | | İ | | | | | | | | | | | | | | |
| Season 2 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0 | 0 | 0 |) (| |) (| 0 0 | | |
| Wetland Function Factor | -0.1 | | | | | -0.1 | | | 1 | 1 | 1 | 1 | | í | 1 1 | | |
| Load Season 1 * | 97.72023584 | | | | | 43.24862352 | | | 19.71778 | | 348.1293581 | | 0.5471 | 40.66030893 | | | |
| Load Season 2 ** | 47.80885287 | | | | | 18.40956701 | 0 | | 6.490132 | | 91.61873537 | | 0.2205 | | | Total Load | 1180.88647 |
| | 47.00000207 | | 102.340267 | 20.41203205 | U | 16.40956701 | U | U | 6.490132 | U | 91.010/353/ | U | 0.220 | 14.9350517 | 10.635 | TOTAL LOAD | 1100.00047 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -14.55290887 | (| -35.20976844 | | | -6.165819052 | 0 | | 26.20791 | | 439.7480934 | | 0.7676 | | | | |
| Net Yield | 130.9761798 | 3 (| 316.887916 | 59.49568781 | 0 | 55.49237147 | 0 | 0 | 23.95616 | 0 | 402.2890148 | 0 | 0.701 | 50.11919283 | 3 29.877 | Final Load % Net | 1069.794758 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.41 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | 3 | | | 12.56 | 274.41 | 82.98 | | | 765.66 | | | 7497. | | 2 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 |) (| 28812.26083 | 2099.933454 | 70.88192471 | 1548.623325 | 468.2948 | 0 | 2349.318 | 4320.975675 | 202275.1165 | 137.8134237 | 42309 | 21117.84732 | 994.44 | | |
| Concentration | 0.15 | 0.15 | | | | 0.15 | | | | 0.5 | 1.1 | | 1.1 | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load | 717.1408755 | | | | | | | | | 954 4392696 | 53382.80707 | 30.44093588 | 11166 | 4058.86347 | 7 186.85 | Total Load | 77222.49726 |
| Wetland Function Value | -71.71408755 | | | | | -28.65409995 | | | 620.013 | | 53382.80707 | | | | | . Julia Loudd | |
| Net Yield | 645.4267879 | | | | | | | | 576.5437 | | 49640.1207 | | | | | Final Load | 71479.53731 |
| | 045.4207879 | | 4796.006394 | 349.0940734 | 11.80372238 | 257.888895 | 77.96351 | 0 | 5/0.543/ | 0/4.4004/20 | 49040.1207 | 27.09090099 | 1036. | 3008.12099 | 100.43 | % Net | |
| WATERSHED FUNCTION Scenario 5 - Moderate High | | | | | | | | | | | | | | | | Removal | 7.4 |
| | | | | | | | | | | | | | | 1 | 1 1 | | |
| Flow (existing conditions) | ļ . | | 1 | | | | | - | | | | | | | <u> </u> | | |
| | 485.21 | (| | | | 144.21 | 2.05 | | | 54.48 | | | | | 5 102.57 9853.97 | 1 | |
| 290 and below | 1692,479084 | (| 8079.363067 | 514.953705 | 0 | 503.0242755 | 7.150681 | 0 | 313.9324 | 190.0337184 | 20379.26758 | 5.022917667 | 273.61 | 2055.38488 | 357.78 | | |
| | | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | | | 0.5 | 1.1 | 0.5 | 1.1 | 0.1 | 1 0.04 | | |
| 290 and below Volume = 34372 | 0.15 | | | | | | | | | | | | | | | | |
| 290 and below Volume = 34372 Concentration | | | | -0 1 | -0.1 | -∩ 1 | -0.1 | -0 1 | 1 | | 1 | 1 1 | 1 1 | 11 | 1 1 | | |
| 290 and below Volume = 34372 Concentration Wetland Function Factor | -0.1 | -0.1 | -0.1 | | | 93.07433018 | | | | 46 1858719 | | | | | 1 1 | Total Load | 9004 66470 |
| 290 and below Volume = 34372 Concentration Wetland Function Factor Load | -0.1 313.1585587 | -0.1 | -0.1 1494.920509 | 95.28162655 | 0 | 93.07433018 | 1.323087 | 0 | 98.15205 | 46.1858719 | 6371.649158 | 1.220771944 | 85.545 | 404.1537852 | 2 67.86 | Total Load | 9004.66470 |
| 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value | -0.1 313.1585587 -31.31585587 | -0.° | 1 -0.1 1494.920509 -149.4920509 | 95.28162655 -9.528162655 | 0 | 93.07433018 -9.307433018 | 1.323087 -0.13231 | 0 | 98.15205 98.15205 | 46.1858719 46.1858719 | 6371.649158 6371.649158 | 1.220771944 1.220771944 | 85.545 85.545 | 404.1537852 404.1537852 | 2 67.86 2 67.86 | | 9004.66470 |
| 290 and below Volume = 34372 Concentration Wetland Function Factor Load | -0.1 313.1585587 | -0.° | -0.1 1494.920509 | 95.28162655 -9.528162655 | 0 | 93.07433018 | 1.323087 -0.13231 | 0 | 98.15205 | 46.1858719 46.1858719 | 6371.649158 | 1.220771944 1.220771944 | 85.545 85.545 | 404.1537852 | 2 67.86 2 67.86 | Final Load | 9004.66470 8436.54124 |
| 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value | -0.1 313.1585587 -31.31585587 | -0.° | 1 -0.1 1494.920509 -149.4920509 | 95.28162655 -9.528162655 | 0 | 93.07433018 -9.307433018 | 1.323087 -0.13231 | 0 | 98.15205 98.15205 | 46.1858719 46.1858719 | 6371.649158 6371.649158 | 1.220771944 1.220771944 | 85.545 85.545 | 404.1537852 404.1537852 | 2 67.86 2 67.86 | | |

Table C25. Low Watershed Functions for Phosphorus - St. Johns Bayou.

| St. Johns Bayou - Expected | | | | | | | | | | | | | | | | | | |
|---|--|---|--|---|--|---|---|-------------------------------|--|--|--|---|---|---|---|----------|---------------------|----------------------|
| | Cypress/Tupelo 16 Scru | ıb/shrub marsh 19 | BLH 42 | Riparian 43 River 4 | 5 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/corn 39 | Corn 40 | Herb. Veg. 41 | Pasture | LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | _ | | | | | | |
| 275 ft | 15.32 | 0 | | 21.29 | 0 | 8.95 52.74341142 | 0 | | | 0 | 18.42 | 0 | | | 3.38 | 109.28 | | |
| Volume = 644 Concentration/Export Coefficient | 90.28257687 | 0 | | 125.4644949 | 0 | 52.74341142 | 0 | | 39.89641 | | | 3.6 | 0.2357 | | | | | |
| Wetland Function Factor | 0.8 | 0.8 | | -0.5 | -0.1 | -0.2 | | | | | 3.0 | 3.0 | 3.0 | 3.1 | | | | |
| I oad | 445.4650682 | 0.0 | | 619.0568735 | -0.1 | 260.2423212 | 0.8 | | | | | 0 | 1.2214 | | | | Total Load | 3229.177386 |
| Wetland Function Value | 356.3720545 | 0 | | -309.5284367 | 0 | -52.04846423 | 0 | | | | | | | | | | TOTAL LOAG | 3229.177300 |
| | 356.3720545 | | | -309.5284367 309.5284367 | 0 | -52.04846423 208.1938569 | 0 | | 187.0317 | | 508.8808463 | | | | | | Final Load | 2510.937657 |
| Net Yield | 330.3720343 | | 658.3113018 | 309.5264367 | 0 | 206.1936569 | U | U | 167.0317 | | 506.6606463 | U | 1.1051 | 100.130729 | 93.376 | | % Net | 2510.937657 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 22.24 |
| Scenario 2 - Authorized Project (2 seasons) | | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | 0 | 739.84 | 71.34 | 0 | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | 0.01 | 1.22 | 194.0 | 52.73 | 3231.27 | | |
| 280 ft | 80.22 | 0 | | 34.25 | 0 | 30.89 | 0 | | | | | 0.01 | | | | | | |
| Volume Season 1 = 7298 | 564.7967703 | 0 | | 161.1252913 | 0 | 254.5616987 | 0 | | 142.2212 | | 3938.716102 | | 2.7554 | | | | | |
| Volume Season 2 = 1692 | 258.3850298 | 0 | | 110.3177172 | 0 | 99.49530753 | 0 | | | | 495.1574499 | | | | | | | |
| Concentration/Export Coefficient | 200.0000200 | | 000.1021010 | 110.0111112 | | 00.10000700 | | | 00.0702 | | 100.1011100 | | 1.1010 | 00.7171001 | 00.007 | | | |
| Season 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | | |
| Concentration/Export Coefficient Season 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | | 0 | 0 | 0 | | 0 | | | |
| Wetland Function Factor | 0.8 | 0.8 | 0.8 | -0.5 | -0.1 | -0.2 | 0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | | 1 | | | |
| Load Season 1 * | 2786.77504 | 0 | | 795.0115223 | 0 | 1256.037969 | 0 | 0 | 747.6075 | | 20704.46657 | 0.118724398 | 14.484 | 2303.49077 | 626.03 | | | |
| Load Season 2 ** | 1274.902743 | 0 | | 544.3208546 | 0 | | 0 | | 173.0702 | | 2443.166277 | | 5.8803 | | | | Total Load | 45856.40684 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | | |
| Seasons) | 3249.342227 | 0 | 8779.068668 | -669.6661884 | 0 | -349.3919511 | 0 | 0 | 920.6777 | 29.08747762 | 23147.63285 | 0.118724398 | 20.365 | 2701.75882 | 914.96 | | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers | | | | | | | | | | | | | | | | | | |
| ** No Export for upland and ag | | | | | | | | | | | 1 | | | | | | | |
| | 3249.342227 | 0 | 8779.068668 | 669.6661884 | | 1397.567804 | 0 | | 833.1971 | 00.05700050 | 20959.90643 | 0.407500440 | 40.447 | 2445.71652 | 007.04 | | | 39206.65267 |
| Net Yield | 3249.342227 | | 8779.068668 | 669.6661884 | - 0 | 1397.567804 | - 0 | 0 | 833.1971 | 26.35720256 | 20959.90643 | 0.107580419 | 18.417 | 2445.71652 | 827.31 | | Final Load % Net | 39206.65267 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 14.50 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | 0 | | 47.27 | 0 | 44.74 | | | | | 292.73 | | | | | 825.36 | | |
| 280 ft | 80.22 | 0 | | 34.25 | 0 | 30.89 | | | | | | | | | | 525.31 | | |
| Volume Season 1 = 3080 | 377.2380537 | 0 | | 176.3976931 | 0 | 166.9564796 | | | 61.87167 | | 1092.381991 | | 1.7166 | | | | | |
| Volume Season 2 = 1692 | 258.3850298 | 0 | 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | 0 | 495.1574499 | 0 | 1.1918 | 80.7171384 | 58.557 | | | |
| Concentration/Export Coefficient | | | | | | | | | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | | |
| Season 1 Concentration/Export Coefficient | 4 | 4 | 4 | 4 | 4 | 4 | - 4 | 4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.1 | 3.0 | | | |
| | | | | | | | | | | | | | ١ , | | | | | |
| Season 2 | 0.0 | 0.8 | 0.8 | -0.5 | -0.1 | - 4 | 0.0 | 0.0 | - 0 | | - 0 | 1 | - 0 | <u> </u> | 1 1 | | | |
| Wetland Function Factor Load Season 1 * | 0.8 1861.337826 | 0.8 | | -0.5 870.3673856 | -0.1 | -0.2 823.7833051 | | | 317.3601 | 1 | 5603.185925 | | _ | 788.614969 | | | | |
| Load Season 1 | 1274.902743 | | | 544.3208546 | 0 | 490.9217868 | 0 | | 173.0702 | | 2443.166277 | 0 | | | | | Total Load | 23817.98455 |
| | 12/4.902/43 | | 2/29.0/3/65 | 544.3206546 | U | 490.9217000 | U | U | 173.0702 | | 2443.1002// | U | 5.0003 | 390.200047 | 200.93 | | TOTAL LOAG | 23617.96455 |
| Wetland Function Value (Both Seasons) | 2508.992455 | | 5989.086342 | -707.3441201 | 0 | -262.9410184 | _ | | 490.4303 | | 8046.352201 | | 14.685 | 1186.88301 | 727.64 | | | |
| Net Yield | 2508.992455 | | | 707.3441201 | 0 | | 0 | | 490.4303 | | 7263.041191 | 0 | | | | | Final Load | 19703.81683 |
| Net Heid | 2306.992433 | | 3909.000342 | 707.3441201 | 0 | 1031.704074 | - 0 | - 0 | 442.3931 | | 7203.041191 | 0 | 13.23 | 1071.1939 | 030.33 | | % Net | 19703.01003 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 17.27 |
| Scenario 4 - Extreme High Flow | | | | | | | | | | | | | | | | | | |
| (existing conditions) | 000 77 | | | 070.4 | 45 | 074 | 00 | | 440 | 9 | 05045 | | 7405 | | 470.5 | E 4000 - | | |
| 300 and below | 686.78 | 0 | | 372.1 | 12.56 | 274.41 | | 0 | | | | | 7497.1 | | | 54998.3 | | |
| Volume = 310381 | 3875.819129 | | | 2099.933454 | 70.88192471 | 1548.623325 | | | 2349.318 | | 202275.1165 | | | | | | | |
| Concentration | 4 | 0.8 | | 4 | 4 | 4 | | 4 | | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | | |
| | 2.0 | | 0.8 | | -0.1 349.7399224 | -0.2 | | | | 20405 71700 | 1 1050000 110 | 745 5050505 | 240000 | 400040 707 | 1 5400 1 | | Total Land | 4000004 171 |
| Wetland Function Factor | 0.8 | | | | | 7641.09332 | | | 12198.32 12198.32 | | 1050269.149 | 715.5659565 715.5659565 | | | | | Total Load | 1602064.171 |
| Wetland Function Factor Load | 19123.75668 | 0 | 142163.1524 | 10361.32366 | | 4500 04000 | | | | | 1050269.149 | | | | | | | |
| Wetland Function Factor Load Wetland Function Value | 19123.75668 15299.00534 | 0 | 142163.1524 113730.5219 | -5180.661828 | -34.97399224 | -1528.218664 | | | | | 050464 1704 | | | | | | Final Load | 1407650 404 |
| Wetland Function Factor Load Wetland Function Value Net Yield | 19123.75668 | 0 | 142163.1524 113730.5219 | | | -1528.218664 6112.874656 | | | 11039.14 | | 950464.1791 | 647.5671595 | | | | | Final Load % Net | 1427650.181 |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION | 19123.75668 15299.00534 | 0 | 142163.1524 113730.5219 | -5180.661828 | -34.97399224 | | | | | | 950464.1791 | | | | | | | 1427650.181 10.89 |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High | 19123.75668 15299.00534 | 0 | 142163.1524 113730.5219 | -5180.661828 | -34.97399224 | | | | | | 950464.1791 | | | | | | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) | 19123.75668 15299.00534 15299.00534 | 0 0 0 | 142163.1524 113730.5219 113730.5219 | -5180.661828 5180.661828 | -34.97399224 | 6112.874656 | 1848.498 | 0 | 11039.14 | 20303.69661 | | 647.5671595 | 198807 | 99229.98810 | 4672.7 | | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 230 and below | 19123.75668 15299.00534 15299.00534 485.21 | 0 0 | 142163.1524 113730.5219 113730.5219 2316.24 | -5180.661828 5180.661828 | -34.97399224 314.7659301 | 6112.874656 | 1848.498 | 0 | 11039.14 | 20303.69661 | 5842.45 | 647.5671595 | 198807 78.44 | 99229.98810 | 6 4672.7 | 9853.97 | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 | 19123.75668 15299.00534 15299.00534 15299.00534 485.21 1692.479084 | 0 0 | 142163.1524 113730.5219 113730.5219 2316.24 8079.363067 | -5180.661828 5180.661828 | -34.97399224 | 6112.874656 144.21 503.0242755 | 2.05 7.150681 | 0 | 90 313.9324 | 20303.69661 54.48 190.0337184 | 5842.45 20379.26758 | 647.5671595 1.44 5.022917667 | 78.44 273.61 | 99229.98811 589.21 2055.38488 | 6 4672.7 5 102.57 6 357.78 | 9853.97 | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration | 19123.75668 15299.00534 15299.00534 15299.00534 485.21 1692.479084 4 | 0 0 0 | 142163.1524 113730.5219 113730.5219 2316.24 8079.363067 | -5180.661828 5180.661828 147.63 514.953705 4 | -34.97399224 314.7659301 0 0 4 | 6112.874656 144.21 503.0242755 4 | 2.05 7.150681 | 0 0 0 4 | 90 313.9324 3.6 | 20303.69661 54.48 190.0337184 | 5842.45 20379.26758 3.6 | 1.44 5.022917667 3.6 | 78.44 273.61 3.6 | 99229.98811 589.21 2055.38488 | 6 4672.7 6 102.57 6 357.78 6 3.6 | 9853.97 | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor | 19123.75668 15299.00534 15299.00534 15299.00534 485.21 1692.479084 4 0.8 | 0 0 0 0 0 0 0 0 0 | 142163.1524 113730.5219 113730.5219 2316.24 8079.363067 4 0.88 | -5180.661828 5180.661828 147.63 514.953705 4 -0.5 | -34.97399224 314.7659301 | 144.21 503.0242755 4 -0.2 | 2.05 7.150681 4 0.8 | 0 0 0 4 -0.2 | 90 313.9324 3.6 | 20303.69661 54.48 190.0337184 3.6 | 5842.45 20379.26758 3.6 1 | 1.44 5.022917667 3.6 | 78.44 273.61 3.6 | 589.2: 2055.38488 | 6 4672.7 6 102.57 6 357.78 6 3.6 | 9853.97 | % Net Removal | 10.89 |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 19123.75688 15299.00534 15299.00534 15299.00534 485.21 1692.479084 4 0.8 8350.894898 | 0 0 0 0 0 0 0 4 0.8 | 142163.1524 113730.5219 113730.5219 113730.5219 2316.24 8079.363067 4 4 39864.5469 | -5180.661828 5180.661828 147.63 514.953705 4 -0.5 2540.843375 | -34.97399224 314.7659301 0 0 4 -0.1 | 144.21 503.0242755 4 -0.2 2481.982138 | 2.05 7.150681 4 0.8 35.28232 | 0 0 0 4 -0.2 | 90 313.9324 3.6 1 1680.103 | 54.48 190.0337184 3.6 1 1017.022172 | 5842.45 20379.26758 3.6 1 109065.734 | 1.44 5.022917667 3.6 1 26.88164332 | 78.44 273.61 3.6 1 | 589.21 2055.38488 3.1 11000.00578 | 5 4672.7 5 102.57 6 357.78 6 3.6 1 1914.8 | 9853.97 | % Net | |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value Wetland Function Value | 19123.75688 15299.00534 15299.00534 15299.00534 485.21 1692.479084 4 0.8 8350.894898 680.715919 | 0 0 0 0 0 0 4 0.8 | 142163.1524 113730.5219 113730.5219 113730.5219 2316.24 8079.363067 4 0.8 39864.5489 31891.63752 | -5180.661828 5180.661828 147.63 514.963705 4 -0.5 2540.843375 -1270.421687 | -34.97399224 314.7659301 0 0 0 4 -0.1 0 | 144.21 503.0242755 4 -0.2 2481.982138 -496.3964276 | 2.05 7.150681 0.8 35.28232 28.22586 | 0 0 0 4 -0.2 0 | 90 313.9324 3.6 1 1680.103 1680.103 | 20303.69661 54.48 190.0337184 3.6 1 1017.022172 1017.022172 | 5842.45 20379.26758 3.6 1 109065.734 109065.734 | 1.44 5.022917667 3.6 1 1.26.88164332 26.88164332 | 78.44 273.61 3.6 1 1464.3 1464.3 | 589.2! 2055.38488: 3.1 11000.0057: | 5 4672.7 5 102.57 5 357.78 6 3.6 1 1914.8 8 1914.8 | 9853.97 | % Net Removal | 177527.5988 |
| Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 19123.75688 15299.00534 15299.00534 15299.00534 485.21 1692.479084 4 0.8 8350.894898 | 0 0 0 0 0 0 0 4 0.8 | 142163.1524 113730.5219 113730.5219 113730.5219 2316.24 8079.363067 4 0.8 39864.5489 31891.63752 | -5180.661828 5180.661828 147.63 514.953705 4 -0.5 2540.843375 | -34.97399224 314.7659301 0 0 4 -0.1 | 144.21 503.0242755 4 -0.2 2481.982138 -496.3964276 | 2.05 7.150681 0.8 35.28232 28.22586 | 0 0 0 4 -0.2 0 | 90 313.9324 3.6 1 1680.103 | 20303.69661 54.48 190.0337184 3.6 1 1017.022172 1017.022172 | 5842.45 20379.26758 3.6 1 109065.734 | 1.44 5.022917667 3.6 1 1.26.88164332 26.88164332 | 78.44 273.61 3.6 1 1464.3 1464.3 | 589.21 2055.38488 3.1 11000.00578 | 5 4672.7 5 102.57 5 357.78 6 3.6 1 1914.8 8 1914.8 | 9853.97 | % Net Removal | 10.89 |

Table C26. Expected Watershed Functions for Organic Carbon - St. Johns Bayou.

| St. Johns Bayou - High Rete | ention - Organi | c Carbon | | | | | | | | | | | | | | | | |
|--|--|--|--|--|---|---|---|---|--|---|--|--|---|--|--|----------|--------------------------------|-------------------------------------|
| | | | | | | | | | | | | | | | | | | |
| | ypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 River | 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/corn 39 | Corn 40 | Herb. Veg. 41 | Pasture | LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | (| | | 0 | 8.95 | | | | | 18.42 | | | | | 109.28 | | |
| Volume = 644 | 90.28257687 | (| | 125.4644949 | 0 | 52.74341142 | | | 39.89641 | | 108.5512445 | | | | | | | |
| Concentration/Export Coefficient | 4 | 4 | | | 4 | 4 | 4 | | | | | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | | | -0.9 | -0.9 | | | | | | | | | | | | |
| Load | 445.4650682 | (| | | 0 | | 0 | | 206.717 | | | | 1.2214 | | | | Total Load | 3229.177386 |
| Wetland Function Value | -400.9185614 | (| -740.6002145 | -557.1511861 | 0 | -234.218089 | 0 | 0 | 41.34341 | 0 | 112.4882666 | 0 | 0.2443 | 41.58768162 | 2 20.641 | | | |
| Net Yield | 44.54650682 | (| 82.28891272 | 61.90568735 | 0 | 26.02423212 | 0 | 0 | 37.40633 | 0 | 101.7761693 | 0 | 0.221 | 37.6273459 | 18.676 | | Final Load | 410.4717405 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 87.29 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | | |
| (2 seasons) 285 ft | 250.07 | | 739.84 | 71.34 | | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | 201 | 1.22 | 40.0 | 2 52.73 | 2024.07 | - | |
| | | | | | 0 | | | | | | | | | | | | | |
| 280 ft | 80.22 | (| | 34.25 | 0 | 30.89 | 0 | | | | 153.73 | | | | | 525.31 | | |
| Volume Season 1 = 7298 | 564.7967703 | (| | | 0 | | | | 142.2212 | | 3938.716102 | | | 438.204780 | | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | . 0 | 495.1574499 | 0 | 1.1918 | 80.7171384 | 58.557 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 1 | 4 | 4 | 1 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | | |
| Concentration/Export Coefficient | | | i i | | | i i | | i i | 1 | | 1 | 1 | | 1 | | | + | |
| Season 2 | 4 | 4 | 1 4 | . 4 | 4 | 4 | 4 | 4 | n | n . | n 0 | n | 0 | | 0 0 | | | |
| Wetland Function Factor | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.: | 2 0.2 | | | |
| | | | | | -0.9 | | -0.9 | | | | 20704.46657 | | | | | | + | |
| Load Season 1 * Load Season 2 ** | 2786.77504 1274.902743 | | | | 0 | 1200.001000 | | | 747.6075 173.0702 | | 2443.166277 | | | | | | Total Load | 45856.40684 |
| | 1274.902743 | | 2729.073785 | 544.3208546 | 0 | 490.9217868 | - 0 | 0 | 173.0702 | 0 | 2443.1bb277 | 0 | 5.8803 | 398.268047 | 288.93 | | I Utal Load | 45856.40684 |
| Wetland Function Value (Both | | | | | | l | | | 1 | .1 | | _ | l | l | | | | |
| Seasons) | -3655.510005 | (| -9876.452252 | -1205.399139 | 0 | -1572.26378 | 0 | 0 | 184.1355 | 5.817495525 | 4629.52657 | 0.02374488 | 4.0729 | 540.351765 | 182.99 | | | |
| * Export Coefficients were | | | | | | | | | | | | | | | | | | |
| reduced by 50% for upland and | | | | | | | | | | | | | | | | | | |
| ag land covers | | | | | | | | | | | | | | | | | | |
| ** No Export for upland and ag | | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | | |
| Net Yield | 406.1677784 | | 1097.383584 | 133.9332377 | | 174.6959755 | 0 | | 166.6394 | E 274 440F40 | 4191.981287 | 0.004540004 | 2 6024 | 489.143304 | 165 40 | | Final Load | 6834.382132 |
| INCL HOLD | 400.1077/84 | | 1097.383584 | 133.9332317 | 0 | 1/4.0909/55 | - 0 | 0 | 100.0394 | 5.271440512 | +191.961287 | 0.021516084 | 3.0034 | +09.143304 | 100.46 | | % Net | 0034.302132 |
| WATERCHER FLANCTION | | | | | | | | | | | | | | | | | | |
| WATERSHED FUNCTION | | | 1 | | | | | | 1 | | | | | | | | Removal | 85.10 |
| | | | 1 | | | | | | | | | | | | | | | |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | (| | | 0 | 44.74 | | | | | 292.73 | | | | | 825.36 | | |
| 280 ft | 80.22 | (| 171.72 | 34.25 | 0 | 30.89 | 0 | 0 | 10.89 | 0 | 153.73 | 0 | 0.37 | 25.0 | 18.18 | 525.31 | | |
| Volume Season 1 = 3080 | 377.2380537 | (| 964.1606087 | 176.3976931 | 0 | 166.9564796 | 0 | 0 | 61.87167 | 0 | 1092.381991 | 0 | 1.7166 | | | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | | 0 | 99.49530753 | | | 35.0762 | | 495.1574499 | 0 | 1.1918 | | | | | |
| Concentration/Export Coefficient | | | | | | | | 1 | T | i - | | | | 1 | 1 | | | |
| Season 1 | 4 | 4 | 1 4 | . 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.0 | 3.6 | | | |
| Concentration/Export Coefficient | | | 1 | | | | - | - | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | + | |
| | | | | | | | | | | | | _ | | | | | | |
| Season 2 | 4 | - 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | . 0 | . 0 | 0 | - 0 | | 0 | | | |
| Wetland Function Factor | -0.9 | -0.9 | | | -0.9 | -0.9 | | | | | | | | | | | | |
| Load Season 1 * | 1861.337826 | | | | 0 | 823.7833051 | | | 317.3601 | | | | | | | | | |
| Load Season 2 ** | 1274.902743 | (| 2729.073785 | 544.3208546 | 0 | 490.9217868 | 0 | 0 | 173.0702 | ! 0 | 2443.166277 | 0 | 5.8803 | 398.268047 | 2 288.93 | | Total Load | 23817.98455 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | \neg | |
| Seasons) | -2822.616512 | (| -6737.722135 | -1273.219416 | 0 | -1183.234583 | 0 | 0 | 98.08606 | 0 | 1609.27044 | 0 | 2.937 | 237.376603 | 4 145.53 | | | |
| Net Yield | 313.6240569 | C | 748.6357928 | | 0 | | | | 88.51901 | | 1452.608238 | | 2.65 | 214.239194 | | | Final Load | 3224.525151 |
| | | | | | | | | 1 | | Ī | | | | | 1 | | % Net | |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | Removal | 86.46 |
| | | | 1 | | | | | l | † | <u> </u> | | | | t | 1 | | | 20.40 |
| Scenario 4 - Extreme High Flow | | | 1 | | | | | - | 1 | 1 | | | _ | | + | | - | |
| | | | | | | | | | | | | | | | | | | |
| (existing conditions) | 00 | | | 070 | 45 | 07 | 00 | - | 440 | | 05045 | | 7407 | | 470.51 | E 4000 - | | |
| 300 and below | 686.78 | | | | 12.56 | 274.41 | | | | | | | 7497.1 | | | 54998.3 | | |
| | | (| | 2099.933454 | 70.88192471 | 1548.623325 | 468.2948 | | 2349.318 | | 202275.1165 | | | | | | | |
| Volume = 310381 | 3875.819129 | | | . 4 | 4 | 4 | 4 | 4 | | | | | | | | | | |
| Volume = 310381 Concentration | | 4 | | | | | -0.9 | | | | | | 0.2 | 0.3 | 2 0.2 | | | |
| Volume = 310381 Concentration Wetland Function Factor | 3875.819129 4 -0.9 | -0.9 | -0.9 | | -0.9 | -0.9 | | | 1 | | | | | | | | | |
| Volume = 310381 Concentration | 3875.819129 4 -0.9 19123.75668 | | -0.9 | | -0.9 349.7399224 | -0.9 7641.09332 | | 0 | 12198.32 | 22435.71786 | 1050269.149 | 715.5659565 | | 109649.787 | 4 5163.4 | | Total Load | 1602064.171 |
| Volume = 310381 Concentration Wetland Function Factor Load | 3875.819129 4 -0.9 19123.75668 | -0.9 C | -0.9 142163.1524 | 10361.32366 | 349.7399224 | 7641.09332 | 2310.623 | | | | | | 219683 | | | | Total Load | 1602064.171 |
| Volume = 310381 Concentration Wetland Function Factor | 3875.819129 4 -0.9 19123.75668 -17211.38101 | -0.9 (| -0.9 142163.1524 -127946.8372 | 10361.32366 -9325.19129 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 | 2310.623 -2079.56 | 0 | 2439.664 | 4487.143573 | 210053.8298 | 143.1131913 | 219683 43937 | 21929.9574 | 9 1032.7 | | | |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value | 3875.819129 4 -0.9 19123.75668 | -0.9 C | -0.9 142163.1524 -127946.8372 | 10361.32366 -9325.19129 | 349.7399224 | 7641.09332 | 2310.623 -2079.56 | 0 | | 4487.143573 | | 143.1131913 | 219683 43937 | 21929.9574 | 9 1032.7 | | Final Load | 1602064.171 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value | 3875.819129 4 -0.9 19123.75668 -17211.38101 | -0.9 (| -0.9 142163.1524 -127946.8372 | 10361.32366 -9325.19129 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 | 2310.623 -2079.56 | 0 | 2439.664 | 4487.143573 | 210053.8298 | 143.1131913 | 219683 43937 | 21929.9574 | 9 1032.7 | | | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION | 3875.819129 4 -0.9 19123.75668 -17211.38101 | -0.9 (| -0.9 142163.1524 -127946.8372 | 10361.32366 -9325.19129 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 | 2310.623 -2079.56 | 0 | 2439.664 | 4487.143573 | 210053.8298 | 143.1131913 | 219683 43937 | 21929.9574 | 9 1032.7 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High | 3875.819129 4 -0.9 19123.75668 -17211.38101 | -0.9 (| -0.9 142163.1524 -127946.8372 | 10361.32366 -9325.19129 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 | 2310.623 -2079.56 | 0 | 2439.664 | 4487.143573 | 210053.8298 | 143.1131913 | 219683 43937 | 21929.9574 | 9 1032.7 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 | -0.9 (| 9 -0.9 0 142163.1524 0 -127946.8372 0 14216.31524 | 10361.32366 -9325.19129 1036.132366 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 764.109332 | 2310.623 -2079.56 231.0623 | 0 | 2439.664 2207.827 | 4487.143573 4060.739323 | 210053.8298 190092.8358 | 143.1131913 129.5134319 | 219683 43937 39761 | 21929.9574 19845.9976 | 9 1032.7 3 934.54 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 | -0.9 ((| 9 -0.9 142163.1524 0 -127946.8372 14216.31524 | 10361.32366 -9325.19129 1036.132366 | 349.7399224 -314.7659301 34.97399224 | 7641.09332 -6876.983988 764.109332 | 2310.623 -2079.56 231.0623 | 0 | 2439.664 2207.827 | 4487.143573 4060.739323 54.48 | 210053.8298 190092.8358 | 143.1131913 129.5134319 | 219683 43937 39761 78.44 | 21929.9574 19845.9976 19845.9976 | 9 1032.7 3 934.54 5 102.57 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 | -0.9 C | 9 -0.9 142163.1524 0 -127946.8372 0 14216.31524 0 2316.24 0 2316.24 | 10361.32366 -9325.19129 1036.132366 | 349.7399224 -314.7659301 | 7641.09332 -6876.983988 764.109332 | 2310.623 -2079.56 231.0623 | 0 0 | 2439.664 2207.827 90 313.9324 | 4487.143573 4060.739323 0 54.48 190.0337184 | 210053.8298 190092.8358 5842.45 20379.26758 | 143.1131913 129.5134319 1.44 5.022917667 | 219683 43937 39761 78.44 273.61 | 21929.9574 19845.9976 19845.9976 589.2 2055.38488 | 9 1032.7 3 934.54 5 102.57 5 357.78 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 485.21 1692.479084 4 | -0.5 C C C | 9 -0.9 142163.1224 2 -127946.8372 2 14216.31524 2 2316.24 3 8079.36307 4 4 | 10361.32366 -9325.19129 1036.132366 147.63 514.953705 4 | 349.7399224 -314.7659301 34.97399224 | 7641.09332 -6876.983988 764.109332 144.21 503.0242755 | 2310.623 -2079.56 231.0623 2.05 7.150681 4 | 0 0 0 0 0 0 4 | 90 313.9324 3.6 | 4487.143573 4060.739323 54.48 190.0337184 3.6 | 210053.8298 190092.8358 5842.45 20379.26758 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 | 219683 43937 39761 78.44 273.61 3.6 | 21929.9574 19845.9976 19845.9976 589.2 2055.38488 3.3 | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 | -0.9 C | 9 -0.9 142163.1224 2 -127946.8372 2 14216.31524 2 2316.24 3 8079.36307 4 4 | 10361.32366 -9325.19129 1036.132366 1036.132366 147.63 514.953705 4 | 349.7399224 -314.7659301 34.97399224 | 7641.09332 -6876.983988 764.109332 144.21 503.0242755 | 2310.623 -2079.56 231.0623 2.05 7.150681 4 | 0 0 0 0 0 0 4 | 90 313.9324 3.6 | 4487.143573 4060.739323 54.48 190.0337184 3.6 | 210053.8298 190092.8358 5842.45 20379.26758 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 | 219683 43937 39761 78.44 273.61 3.6 | 21929.9574 19845.9976 19845.9976 589.2 2055.38488 3.3 | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 | | Final Load % Net | 275227.7395 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration | 3875.819129 4 -0.9 19123.75668 -17211.38101 1912.375668 485.21 1692.479084 4 | -0.5 C C C | 9 -0.9 142163.1524 127946.8372 0 14216.31524 14216.31524 0 2316.24 0 8079.363067 4 -0.9 | 10361.32366 -9325.19129 1036.132366 1036.132366 147.63 514.953705 4 | 349.7399224 -314.7659301 34.97399224 | 7641.09332 -6876.983988 764.109332 | 2310.623 -2079.56 231.0623 2.05 7.150681 4 -0.9 | 0 0 0 0 4 -0.9 | 90 313.9324 3.6 | 4487.143573 4060.739323 54.48 190.0337184 3.6 0.2 | 210053.8298 190092.8358 5842.45 20379.26758 3.6 0.2 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 0.2 | 219683 43937 39761 78.44 273.61 3.6 | 21929.9574 19845.9976 19845.9976 589.2 2055.38488 3.1 | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 2 0.2 | 9853.97 | Final Load % Net | 275227.7395 82.82 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 3875.819129 4 - 0.9 19123.75688 -17211.3816 1912.375668 485.21 1692.479084 4 - 0.9 8350.894898 | -0.6 () () () () () () () () () () | 9 -0.9 9 142163.1524 1-127946.8372 14216.31524 2 2316.24 2 8079.363067 4 9 9 39864.5466 | 10361.32366 -9325.19129 1036.132366 147.63 514.953705 4 -0.9 2540.843375 | 349.7399224 -314.7659301 34.97399224 0 0 0 4 -0.9 | 7641.09332 -6876.983988 764.109332 | 2310.623 -2079.56 231.0623 2.05 7.150681 4 -0.9 35.28232 | 0 0 0 0 0 4 -0.9 | 90 313.9324 0.2 1680.103 | 4487.143573 4060.739323 54.48 190.0337184 3.66 0.2 1017.022172 | 210053.8298 190092.8358 190092.8358 5842.45 20379.26758 3.6 0.2 109065.734 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 0.2 26.88164332 | 78.44 273.61 3.6 0.2 | 21929.9574 19845.9976 19845.9976 589.21 2055.38488 0 3.1 11000.00574 | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 2 0.2 8 1914.8 | 9853.97 | Final Load % Net Removal | 275227.7395 82.82 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration | 3875.819129 4 -0.9 19123.75668 -17211.3011 1912.375668 485.21 1692.479084 4 -0.9 8350.894898 -7515.804898 | -0.6 C. C. C | 9 | 1036.132366 9325.19129 1036.132366 147.63 514.953705 4 4 -0.9 2540.84375 -2286.759037 | 349.7399224 -314.7659301 34.97399224 0 0 0 4 -0.9 | 7641.09332 -6876.983988 764.109332 -144.21 -503.0242755 -4 -0.9 -2481.982138 -2233.783924 | 2.05 7.150681 4 -0.09 35.28232 -31.7541 | 0 0 0 0 0 4 -0.9 0 | 90 313.9324 0.2 | 4487.143573 4060.739323 54.48 190.0337184 3.6 0.2 1017.02212 203.4044344 | 210053.8298 190092.8358 190092.8358 5842.45 20379.26758 3.6 0.2 109065.734 21813.14681 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 0.2 26.88164332 5.376328664 | 219683 43937 39761 78.44 273.61 3.6 0.2 1464.3 292.86 | 21929.9574: 19845.9976: 19845.9976: 19845.9976: 19845.9976: 19845.9976: 2055.38488: 19846: 11000.0057: 11000.0057: 2200.00115: | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 2 0.2 8 1914.8 6 382.95 | 9853.97 | Final Load % Net Removal | 275227.7395 82.82 177527.5988 |
| Volume = 310381 Concentration Wetland Function Factor Load Wetland Function Value Net Yield WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value Wetland Function Value | 3875.819129 4 - 0.9 19123.75688 -17211.3816 1912.375668 485.21 1692.479084 4 - 0.9 8350.894898 | -0.6 C. C. C | 9 | 1036.132366 9325.19129 1036.132366 147.63 514.953705 4 4 -0.9 2540.84375 -2286.759037 | 349.7399224 -314.7659301 34.97399224 0 0 4 -0.9 0 0 | 7641.09332 -6876.983988 764.109332 | 2.05 7.150681 4 -0.09 35.28232 -31.7541 | 0 0 0 0 0 4 -0.9 0 | 90 313.9324 3.6 0.2 1680.103 336.0205 | 4487.143573 4060.739323 54.48 190.0337184 3.6 0.2 1017.02212 203.4044344 | 210053.8298 190092.8358 190092.8358 5842.45 20379.26758 3.6 0.2 109065.734 | 143.1131913 129.5134319 129.5134319 1.44 5.022917667 3.6 0.2 26.88164332 5.376328664 | 219683 43937 39761 78.44 273.61 3.6 0.2 1464.3 292.86 | 21929.9574: 19845.9976: 19845.9976: 19845.9976: 19845.9976: 19845.9976: 2055.38488: 19846: 11000.0057: 11000.0057: 2200.00115: | 9 1032.7 3 934.54 5 102.57 5 357.78 6 3.6 2 0.2 8 1914.8 6 382.95 | 9853.97 | Final Load % Net Removal | |

Table C27. High Watershed Functions for Organic Carbon - St. Johns Bayou.

| St. Johns Bayou - Low Rete | ention - Organi | c Carbon | | | | | | | | | | | | | | | | |
|--|---|----------------------|---|--|----------------|---|---|---------------------|--|---|---|---|--|--|---|----------|--------------------------------|----------------------------|
| 0 . 0 | | 0 1/1 1 1 1 1 | DI II 40 | D: : 40 | | | | 0 " | 0 " | 0 " / 1 === | 0 1 | 0 1 / | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 River | r 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/corn 39 | Corn 40 | Herb. Veg. 41 | Pasture | LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) 275 ft | 15.32 | | 28.3 | 21.29 | ^ | 8.95 | 0 | 0 | 6.77 | | 18.42 | 0 | 0.04 | 6.8 | 1 3.38 | 109.28 | | |
| Volume = 644 | 90.28257687 | | | | 0 | | | | 39.89641 | | 108.5512445 | | | | | | | |
| Concentration/Export Coefficient | 90.26257667 | | | 125.4644949 | - 0 | 52.74341142 | | | | | | | | | | | | |
| | | | | -0.1 | -0.1 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3. | 3.0 | 1 | | |
| Wetland Function Factor | -0.1 445.4650682 | -0.1 | | | | -0.1 | | -0.1 | 1 000 747 | | 562.441333 | 1 | 4.004 | 207.938408 | 1 400.04 | | Tetal I and | 2220 47720 |
| | | | | | 0 | | | 0 | 206.717 | | | | | | | | Total Load | 3229.177386 |
| Wetland Function Value | -44.54650682 | | | | | | | | 206.717 | | | | | | | | | |
| Net Yield WATERSHED FUNCTION | 400.9185614 | (| 740.6002145 | 557.1511861 | 0 | 234.218089 | 0 | 0 | 187.0317 | | 508.8808463 | 0 | 1.1051 | 188.136729 | 93.378 | | Final Load % Net Removal | 2911.420058 9.84 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | | |
| (2 seasons) 285 ft | 250.07 | | 739.84 | 71.34 | | 112.71 | 0 | 0 | 62.97 | 2.45 | 1743.91 | | 1.22 | | 50 =- | 3231.27 | | |
| | | | | | 0 | | | | | | | | | | | | | |
| 280 ft | 80.22 | | 171.72 | 34.25 | 0 | 30.89 | 0 | | | | 153.73 | | | | | 525.31 | | |
| Volume Season 1 = 7298 | 564.7967703 | | | | 0 | | 0 | | 142.2212 | | 3938.716102 | | | 438.204780 | | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | ! (| 495.1574499 | 0 | 1.1918 | 80.7171384 | 58.557 | | | |
| Concentration/Export Coefficient Season 1 | 4 | . 4 | 1 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 2 | 4 | 4 | 1 4 | 4 | 4 | 4 | 4 | 4 | 0 |) (| 0 | 0 | | 0 | 0 0 | 1 | | |
| Wetland Function Factor | -0.1 | | | | -0.1 | -0.1 | | | | | 1 | 1 | 1 | | 1 1 | | | |
| Load Season 1 * | 2786.77504 | | | | 0 | 1256.037969 | | | 747.6075 | | 20704.46657 | | | | | | | |
| Load Season 2 ** | 1274.902743 | (| 2729.073785 | 544.3208546 | 0 | 490.9217868 | 0 | 0 | 173.0702 | ! (| 2443.166277 | 0 | 5.8803 | 398.268047 | 288.93 | | Total Load | 45856.40684 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | | |
| Seasons) * Export Coefficients were reduced by 50% for upland and | -406.1677784 | (| -1097.383584 | -133.9332377 | 0 | -174.6959755 | 0 | 0 | 920.6777 | 29.08747762 | 23147.63285 | 0.118724398 | 20.365 | 2701.75882 | 914.96 | | | |
| ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | | |
| land covers Net Yield | 3655.510005 | i (| 9876.452252 | 1205.399139 | 0 | 1572.26378 | 0 | 0 | 833.1971 | 26.35720256 | 20959.90643 | 0.107580419 | 18.417 | 2445.71652 | 5 827.31 | | Final Load | 41420.63296 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | % Net Removal | 9.67 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | (| 258.37 | 47.27 | 0 | 44.74 | 0 | 0 | 16.58 | (| 292.73 | 0 | 0.46 | 41. | 22.92 | 825.36 | | |
| 280 ft | 80.22 | ! (| 171.72 | 34.25 | 0 | 30.89 | 0 | 0 | 10.89 | (| 153.73 | 0 | 0.37 | 25.0 | 18.18 | 525.31 | | |
| Volume Season 1 = 3080 | 377.2380537 | (| 964.1606087 | 176.3976931 | 0 | 166.9564796 | 0 | 0 | 61.87167 | (| 1092.381991 | 0 | 1.7166 | | | | | |
| Volume Season 2 = 1692 | 258.3850298 | (| 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | ! (| 495.1574499 | 0 | 1.1918 | 80.7171384 | 58.557 | | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | | |
| Season 1 Concentration/Export Coefficient | 4 | 4 | 1 4 | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Season 2 | 4 | | 1 4 | 4 | 4 | 4 | 4 | 4 | |) (| 0 | 0 | | , | 0 0 | | | |
| Wetland Function Factor | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 1 | | 1 | 1 | 1 | | 1 1 | | | |
| Load Season 1 * | 1861.337826 | | | | 0.1 | 823.7833051 | | | 317.3601 | | 5603.185925 | Ö | 8.8049 | 788.614969 | . 438.71 | | | |
| Load Season 2 ** | 1274.902743 | | | | 0 | 490.9217868 | | | 173.0702 | | 2443.166277 | | | | | | Total Load | 23817.98455 |
| Wetland Function Value (Both | 1271.002710 | ` | 2720.070700 | 011.0200010 | | 100.0211000 | | | | ` | L-110.100211 | | 0.0000 | 000.200017 | 200.00 | | TOIGH EOGG | 20017.00100 |
| Seasons) | -313.6240569 | | -748.6357928 | -141.468824 | 0 | -131.4705092 | | | 490.4303 | | 8046.352201 | | 14.685 | 1186.88301 | 7 727 64 | | | |
| Net Yield | 2822.616512 | | | | 0 | | | | 442.5951 | | 7263.041191 | | | | | | Final Load | 21463.42249 |
| WATERSHED FUNCTION | 2022.010312 | | 0/0/./22100 | 1273.213410 | | 1100.204000 | | | 442.5551 | | 7200.041101 | | 13.20 | 10/1.1303 | 030.33 | | % Net Removal | 9,89 |
| | | | | | | | | | | | | | | | | | | 3.03 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | | | | 12.56 | 274.41 | | | 416.29 | | | | 7497.1 | | | 54998.3 | | |
| Volume = 310381 | 3875.819129 | | | 2099.933454 | 70.88192471 | 1548.623325 | 468.2948 | | 2349.318 | | 202275.1165 | | | | | | | |
| Concentration | 4 | | | 4 | 4 | 4 | 4 | 4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3. | 3.6 | | | |
| Wetland Function Factor | -0.1 | | | | -0.1 | -0.1 | | -0.1 | | | 1 | | | | 1 1 | | | |
| Load | 19123.75668 | | | | 349.7399224 | 7641.09332 | | | 12198.32 | | 1050269.149 | | | | | | Total Load | 1602064.171 |
| Wetland Function Value | -1912.375668 | | | | -34.97399224 | -764.109332 | | | 12198.32 | | 1050269.149 | | | | | | | |
| Net Yield | 17211.38101 | | 127946.8372 | | 314.7659301 | 6876.983988 | | | 11039.14 | | 950464.1791 | | | | | | Final Load % Net | 1448918.573 |
| IVEC FIELD | | 1 | 1 | | | | | | | | | | | | | | Removal | 9.56 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High | | | | | | | | | | | | | | | | | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) | 485.21 | | 2316.24 | 147.63 | 0 | 144.21 | 2,05 | 0 | 90 | 54.48 | 5842 45 | 1,44 | 78.44 | 589.2 | 5 102,57 | 9853,97 | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below | | | | | 0 | | | | | | | | | | | 9853.97 | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 | 485.21 1692.479084 | | 8079.363067 | | 0 0 4 | | | | 313.9324 | 190.0337184 | 20379.26758 | 5.022917667 | 273.61 | 2055.38488 | 357.78 | | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration | 1692.479084 4 | (| 8079.363067 4 4 | 514.953705 | 4 | 503.0242755 | 7.150681 | 0 | 313.9324 | 190.0337184 3.6 | 20379.26758 | 5.022917667 3.6 | 273.61 3.6 | 2055.38488 | 357.78 | | | |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor | 1692.479084 4 -0.1 | -0.1 | 8079.363067 4 4 -0.1 | 514.953705 4 -0.1 | -0.1 | 503.0242755 4 -0.1 | 7.150681 4 -0.1 | 0 4 -0.1 | 313.9324 3.6 | 190.0337184 | 20379.26758 3.6 | 5.022917667 3.6 | 273.61 3.6 | 2055.38488 | 5 357.78 6 3.6 1 1 | | Total Lood | 177507 5000 |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 1692.479084 4 -0.1 8350.894898 | -0.1 | 8079.363067 4 4 -0.1 0 39864.5469 | 514.953705 4 -0.1 2540.843375 | -0.1 0 | 503.0242755 4 -0.1 2481.982138 | 7.150681 4 -0.1 35.28232 | 0 4 -0.1 0 | 313.9324 3.6 1 1680.103 | 190.0337184 3.6 1 1017.022172 | 20379.26758 3.6 1 109065.734 | 5.022917667 3.6 1 26.88164332 | 273.61 3.6 1 1464.3 | 2055.38488 3. 3. 11000.0057 | 5 357.78 6 3.6 1 1 8 1914.8 | | Total Load | 177527.598 |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value | 1692.479084 4 -0.1 8350.894898 -835.0894898 | -0.1 | 0 8079.363067 4 4 -0.1 0 39864.5469 0 -3986.45469 | 514.953705 4 -0.1 2540.843375 -254.0843375 | -0.1 0 0 | 503.0242755 4 -0.1 2481.982138 -248.1982138 | 7.150681 4 -0.1 35.28232 -3.52823 | 0 4 -0.1 0 | 313.9324 3.6 1 1680.103 1680.103 | 190.0337184 3.6 1 1017.022172 1017.022172 | 20379.26758 3.6 1 109065.734 109065.734 | 5.022917667 3.6 1 26.88164332 26.88164332 | 273.61 3.6 1 1464.3 1464.3 | 2055.38488 3 3. 11000.0057 11000.0057 | 357.78 3.6 3.6 1 1 8 1914.8 8 1914.8 | | | 177527.5988 |
| WATERSHED FUNCTION Scenario 5 - Moderate High Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 1692.479084 4 -0.1 8350.894898 | -0.1 | 0 8079.363067 4 4 -0.1 0 39864.5469 0 -3986.45469 | 514.953705 4 -0.1 2540.843375 -254.0843375 | -0.1 0 | 503.0242755 4 -0.1 2481.982138 -248.1982138 | 7.150681 4 -0.1 35.28232 -3.52823 | 0 4 -0.1 0 | 313.9324 3.6 1 1680.103 | 190.0337184 3.6 1 1017.022172 1017.022172 | 20379.26758 3.6 1 109065.734 | 5.022917667 3.6 1 26.88164332 26.88164332 | 273.61 3.6 1 1464.3 1464.3 | 2055.38488 3 3. 11000.0057 11000.0057 | 357.78 3.6 3.6 1 1 8 1914.8 8 1914.8 | | Total Load Final Load % Net | 177527.598i 162482.798i |

Table C28. Low Watershed Functions for Organic Carbon - St. Johns Bayou.

| St. Johns Bayou - Expecte | d Concentration | ns Runoff Coeffici | ents and Function | Factors - Sedime | nts | | | | | | | | | | | | |
|---|-------------------|----------------------|-------------------|------------------|-------------|---------------|-----------|------------|-----------|--------------------|--------------|-----------------|---------|-----------------|------------------|---------------------|-------------|
| | | | | | | | | | | | | | | | | | |
| | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Scenario 1 - Existing | | | | | | | | | | | | | | | | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | | | | | 8.95 | | | | | | | | | 1 3.38 109.28 | 3 | |
| Volume = 644 | 90.28257687 | 0 | | | | | | | 39.89641 | | 108.5512445 | | | 7 40.1321376 | | | |
| Concentration/Export Coefficient | 150 | | | | | 150 | | | | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Wetland Function Factor | -0.8 | | | | | -0.2 | | -0.2 | | | | | 1 1 | | 1 1 | | |
| Load | 16704.94006 | 0 | 30858.34227 | 23214.63275 | 0 | 9759.087043 | 0 | 0 | 7738.19 | (| 21054.27712 | 2 0 | 45.72 | 2 7783.91026 | 9 3863.4 | Total Load | 121022.4796 |
| Wetland Function Value | -13363.95205 | 0 | | -11607.31638 | 0 | -1951.817409 | 0 | 0 | 7738.19 | (| 21054.27712 | 2 0 | 45.72 | 7783.91026 | 9 3863.4 | | |
| Net Yield | 3340.988011 | 0 | | 11607.31638 | | | | | 6999.988 | | 19045.75887 | | | 7041.34733 | | Final Load | 65550.52038 |
| WATERSHED FUNCTION | 0010.000011 | | 01111.000101 | 11001.01000 | | 7007.200000 | | | 0000.000 | | 10040.70007 | | 711.000 | 7041.04700 | 0 0404.0 | % Net Removal | 45.84 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | 0 | 739.84 | 71.34 | 0 | 112.71 | 0 | 0 | | | 1743.91 | 0.01 | | | | 7 | |
| 280 ft | 80.22 | 0 | 171.72 | 34.25 | 0 | 30.89 | 0 | 0 | 10.89 | (| 153.73 | 3 0 | 0.37 | 7 25.0 | 6 18.18 525.3° | 1 | |
| Volume Season 1 = 7298 | 564.7967703 | 0 | 1670.969099 | 161.1252913 | 0 | 254.5616987 | 0 | 0 | 142.2212 | | 3938.716102 | 0.022585547 | 2.7554 | 4 438.204780 | 2 119.09 | | |
| Volume Season 2 = 1692 | 258.3850298 | | | | | 99 49530753 | | | | | 495.1574499 | | | 8 80.7171384 | | | |
| Concentration/Export Coefficient | 200.0000200 | | 000:1021010 | 110.0111112 | | 00.10000100 | - | - | 00.0702 | , | 100.107 1100 | , , | 1.1010 | 3 00.7 17 100 1 | 0 00.007 | | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | ا ا | | |
| Season 2 | 260 | | | | | 260 | | | | (|) C | 0 |) (| ו | 0 0 | 1 | |
| Wetland Function Factor | -0.8 | | | | | -0.2 | | | | 1 | 1 | 1 | 1 1 | 1 | 1 1 | 1 | |
| Load Season 1 * | 104504.064 | | | 29812.93209 | | 47101.42382 | | | 27971.57 | | 774653.0956 | | | 86184.6044 | | | |
| Load Season 2 ** | 82868.67831 | 0 | | 35380.85555 | 0 | 31909.91614 | 0 | 0 | 11249.56 | (| 158805.808 | 3 0 | 382.22 | 2 25887.4230 | 7 18780 | Total Load | 1947118.377 |
| Wetland Function Value (Both | | | . 744 | | | | | 1 | | | | | | | | 1 | |
| Seasons) | -149898.1939 | | -389254.6983 | -32596.89382 | 0 | -15802.26799 | | ۱ ، | 39221.14 | 1088 301623 | 933458.9035 | 4 442047443 | 924 14 | 112072.027 | 5 42203 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | 110000.1000 | | 555251.5555 | 02000.00002 | | 10002:20700 | | | 00221111 | 1000.001020 | 555 155.5555 | 1.112517110 | 024.10 | 112072.027 | 9 12230 | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 37474.54846 | 0 | 97313.67458 | 32596.89382 | 0 | 63209.07197 | 0 | 0 | 35464.67 | 985.9163086 | 844700.4556 | 4.024148198 | 834.94 | 101375.204 | 1 38122 | Final Load | 1252080.966 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 35.70 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | 0 | 258.37 | 47.27 | 0 | 44.74 | 0 | 0 | 16.58 | (| 292.73 | 3 0 | 0.46 | 3 41. | 2 22.92 825.36 | 3 | |
| 280 ft | 80.22 | 0 | 171.72 | 34.25 | . 0 | 30.89 | 0 | 0 | | | 153.73 | 3 | 0.37 | 7 25.0 | | | |
| Volume Season 1 = 3080 | 377.2380537 | 0 | | 176.3976931 | | 166.9564796 | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | |
| Volume Season 2 = 1692 | 258.3850298 | | | 110.3177172 | | 99.49530753 | | | 35.0762 | | 495.1574499 | | | 80.7171384 | | | |
| Concentration/Export Coefficient | 230.3030290 | | 333.1024346 | 110.3177172 | | 99.49030703 | , , | 0 | 33.0702 | | 493.1374498 | , , | 1.1910 | 00.7171304 | 3 36.337 | | |
| | 450 | 450 | | 4.50 | 450 | 450 | | 450 | | 400 | | | | | | | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 0 130 | | |
| Concentration/Export Coefficient | | | | | | | | | | | | | | | | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 0 | (|) c | 0 |) (|) | 0 0 | | |
| Wetland Function Factor | -0.8 | -0.8 | -0.8 | -0.5 | -0.1 | -0.2 | -0.8 | -0.2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 1 | | |
| Load Season 1 * | 69800.16846 | | | | | 30891.87394 | 0 | | 11884.23 | (| 209823.3026 | | 329.73 | 2 29531.3772 | | | |
| Load Season 2 ** | 82868.67831 | 0 | | | | 31909.91614 | | | 11249.56 | | 158805.808 | | | 2 25887.4230 | | Total Load | 1122380.741 |
| Wetland Function Value (Both | 02000.07031 | - | 177303.730 | 33300.03330 | , | 31303.31014 | - | - | 11243.50 | | 130003.000 | , . | 002.22 | 23001.4230 | 7 10700 | Total Load | 1122300.741 |
| | -122135.0774 | | -284630.3611 | -34009.81625 | | 40500 05000 | | | 23133.79 | | | | | 4 55418.8003 | 3 35209 | | |
| Seasons) | | | | | | -12560.35802 | | | | | 368629.1106 | | | | | | |
| Net Yield | 30533.76935 | 0 | 71157.59028 | 34009.81625 | 5 0 | 50241.43207 | 0 | 0 | 20864.03 | | 332536.2404 | 1 0 | 641.9 | 49985.2989 | 6 31748 | Final Load % Net | 621718.4125 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 44.61 |
| Scenario 4 - Extreme High Flow | | 1 | | | | | 1 | | | 1 | | | | 1 | | | |
| (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | | 5105.42 | 372.1 | 12.56 | 274.41 | 82.98 | 0 | 416.29 | 765.66 | 35842.36 | 24.42 | 7497. | 1 374 | 2 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 | | | 2099.933454 | 70.88192471 | 1548.623325 | | | 2349.318 | | 202275.1165 | | 42309 | 21117.8473 | | | |
| Concentration | 260 | | | 260 | | 260 | | | | | | | | | | 1 | |
| Wetland Function Factor | -0.8 | | | | | -0.2 | | | | 130 | 130 | . 130 | | 1 | 1 1 | 1 | |
| | | | | | | | | | | 4400005.05 | 00750000 70 | 45 400 67000 | 45.00 | 7 0000700 00 | 4 220224 | Tetal I av. 1 | 400004070 |
| Load | 1243044.184 | | | | | | | | 775369.6 | | 66758932.76 | | | 7 6969739.89 | | Total Load | 102094379.1 |
| Wetland Function Value | -994435.3473 | | | | | -99334.21316 | | | 775369.6 | | 66758932.76 | | | 7 6969739.89 | | 1 | |
| Net Yield | 248608.8368 | 0 | 1848120.982 | 336743.0188 | 20459.78546 | 397336.8526 | 30038.09 | 0 | 700022.8 | 1287514.569 | 60271609.72 | 41064.05687 | 7 1E+07 | 7 6292452.94 | 1 296310 | Final Load % Net | 84377165.99 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 17.35 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 485.21 | 0 | 2316.24 | 147.63 | 3 0 | 144.21 | 2.05 | 0 | 90 | 54.48 | 5842.45 | 1.44 | 1 78.44 | 4 589.2 | 5 102.57 9853.97 | 7 | |
| Volume = 34372 | 1692,479084 | | | 514.953705 | | | | | 313.9324 | | 20379.26758 | | | | | + | |
| | | | | | | | | | | | | | | | | 1 | |
| Concentration | 260 | | | 260 | | 260 | | | | | | | _ | | | | |
| Wetland Function Factor | -0.8 | | | | | -0.2 | | | | 1 | | | | | 1 1 | | |
| Load | 542808.1684 | | 2591195.548 | 165154.8194 | 0 | 161328.839 | 2293.351 | | 105418.7 | 63813.44337 | 6843371.002 | 1686.698944 | 91878 | 690199.550 | 4 120142 | Total Load | 11259148.3 |
| Wetland Function Value | -434246.5347 | 0 | | | | -32265.7678 | | | 105418.7 | | 6843371.002 | | | 690199.550 | | | |
| Net Yield | 108561.6337 | | | | | | | 0 | 95350.31 | | 6189771.616 | | | 624279.698 | | Final Load | 7999316.524 |
| | 100001.0007 | | 0.0203.1030 | 02077.40300 | | .20000.0712 | .00.07.02 | | 30000.01 | 07.10.72370 | 2.0077010 | 1020.00000 | | 32-12-10-000 | | % Net | |
| WATERSHED FUNCTION | | 1 | | | | | 1 | 1 | 1 | | | | | 1 | | Removal | 28.9 |

Table C29. Expected Watershed Functions for Sediments - St. Johns Bayou.

| St. Johns Bayou - High Re | tention - Sedime | ents | | | | | | | | | | | | | | | |
|---|---|----------------------|---|--|-------------------------------|---|-------------------------------------|----------------------|------------------------------------|--|---------------------------------|--|------------------------------|--|---------------------------------------|-----------------------------|--------------------------|
| | | | | | | | | | | | | | | | | | |
| Contour Range Scenario 1 - Existing | Cypress/Tupelo 16 | Scrub/shrub marsh 19 | BLH 42 | Riparian 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Cotton 36 | Cotton/soybeans 37 | Soybeans 38 | Soybeans/com 39 | Com 40 | Herb. Veg. 41 | Pasture LC Total | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | | 28.3 | 21.29 | 9 0 | 8.95 | 0 | 0 | 6.77 | 0 | 18.42 | 0 | 0.04 | 6.8 | 3.38 109.28 | 3 | |
| Volume = 644 | 90.28257687 | (| | 125.4644949 | 0 | 52.74341142 | 0 | 0 | 39.89641 | 0 | 108.5512445 | 0 | 0.2357 | 40.1321376 | 3 19.919 | | |
| Concentration/Export Coefficient | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | 130 | 130 | 130 | 130 | 130 | 130 | | |
| Wetland Function Factor | -0.9 | -0.9 | | | | -0.9 | | | | | | | | | | | |
| Load | 16704.94006 | (| | | | | | | 7738.19 | | 21054.27712 | | | 7783.91026 | | Total Load | 121022.479 |
| Wetland Function Value | -15034.44605 | | | | | | | | 1547.638 | | 4210.855423 | | 9.1441 | | | | |
| Net Yield WATERSHED FUNCTION | 1670.494006 | (| 3085.834227 | 2321.463275 | 5 0 | 975.9087043 | 0 | 0 | 1399.998 | 0 | 3809.151773 | 0 | 8.2718 | 1408.26946 | 7 698.96 | % Net Removal | 15378.3557 87.2 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | Itemovar | 07.2 |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | | 739.84 | | | | | | | | | | | | | | |
| 280 ft | 80.22 | | 171.72 | | | | | | | 0 | | | | | | | |
| Volume Season 1 = 7298 | 564.7967703 | | | 161.1252913 | | | | | 142.2212 | | 3938.716102 | | | 438.204780 | | | |
| Volume Season 2 = 1692 Concentration/Export Coefficient | 258.3850298 | (| | | | 99.49530753 | | | 35.0762 | | 495.1574499 | | | 80.7171384 | | | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 13 | 130 | - | |
| Concentration/Export Coefficient Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | | | | | | | | | |
| Season 2 Wetland Function Factor | -0.9 | | | | | -0.9 | | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.: | 2 0.2 | + | |
| Load Season 1 * | 104504.064 | | | | | | | | 27971.57 | | 774653.0956 | | | 86184.6044 | | + + + | |
| Load Season 2 ** | 82868.67831 | | | | | | | | 11249.56 | | 158805.808 | | | 25887.4230 | | Total Load | 1947118.37 |
| Wetland Function Value (Both | 02000.07031 | | 111309.190 | , 33000.03330 | 0 | 51303.31014 | " | - 0 | 11240.00 | | 130003.000 | | 302.22 | 25007.7250 | .0700 | . Jiai Lodu | 1047 110.37 |
| Seasons) | -168635.4681 | (| -437911.5356 | -58674.40887 | 0 | -71110.20597 | 0 | 0 | 7844.227 | 217.6603247 | 186691.7807 | 0.888409489 | 184.83 | 22414.4055 | 1 8440.6 | | |
| * Export Coefficients were reduced by 50% for upland and ag land covers ** No Export for upland and ag | | | | | | | | | | | | | | | | | |
| land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 18737.27423 | | 48656.83729 | 6519.378763 | 3 0 | 7901.133996 | 0 | 0 | 7092.933 | 197.1832617 | 168940.0911 | 0.80482964 | 166.99 | 20275.0408 | 2 7624.3 | Final Load | 286111.979 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 85.3 |
| | | | | | | | | | | | | | | | | | |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | _ | _ | | | | | | | | | |
| 282 ft | 101.09 | | | | | 44.74 | | | | 0 | | | | | | | |
| 280 ft | 80.22 377.2380537 | | | | | | | | | 0 | 153.73 | | | 25.0 | | | |
| Volume Season 1 = 3080 Volume Season 2 = 1692 | 258.3850298 | | | | | | | | 61.87167 35.0762 | | 495.1574499 | | | 80.7171384 | | | |
| Concentration/Export Coefficient | 230.3030290 | | 333.1024340 | 110.3177172 | 2 0 | 99.49030753 | - | , 0 | 33.0702 | | 495.1574498 | | 1.1910 | 00.7171304 | 30.337 | _ | |
| Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | | |
| Concentration/Export Coefficient | 130 | 130 | 130 | 130 | 130 | 130 | 150 | 130 | 130 | 130 | 130 | 150 | 130 | 15 | 7 130 | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | | | | | | | | | |
| Wetland Function Factor | -0.9 | | | | | -0.9 | | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0. | 0.2 | | |
| Load Season 1 * | 69800.16846 | | | | | | | | 11884.23 | | 209823.3026 | | | 29531.3772 | | | |
| Load Season 2 ** | 82868.67831 | (| | | | | | | 11249.56 | | 158805.808 | | | 25887.4230 | | Total Load | 1122380.74 |
| Wetland Function Value (Both | | | | | | | | | | | | | | | | | |
| Seasons) | -137401.9621 | (| -320209.1563 | | | -56521.61108 | | | 4626.758 | | 73725.82212 | 0 | 142.39 | | | | |
| Net Yield | 15266.88468 | (| 35578.79514 | 6801.963251 | 1 0 | 6280.179008 | 0 | 0 | 4172.805 | 0 | 66507.24808 | 0 | 128.39 | 9997.05979 | 2 6349.7 | Final Load | 151082.98 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 86.5 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | | 5105.42 | 372.1 | 1 12.56 | 274.41 | 82.98 | 0 | 416.29 | 765.66 | 35842.36 | 24 42 | 7497.1 | 374 | 2 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 | | | | | | | | 2349.318 | | 202275.1165 | | | 21117.8473 | | | |
| Concentration | 260 | | | | | 260 | | | | 130 | | | | | | | |
| Wetland Function Factor | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | -0.9 | | | 0.2 | | | | | | | | |
| Load | 1243044.184 | | | | | | | | 775369.6 | | 66758932.76 | | | | | Total Load | 102094379. |
| Wetland Function Value | -1118739.766 | (| | | -20459.78546 | | | | 155073.9 | | 13351786.55 | | | 1393947.97 | | | |
| Net Yield | 124304.4184 | (| 924060.4908 | 67348.60376 | 2273.309495 | 49667.10658 | 15019.05 | 0 | 140004.6 | 257502.9139 | 12054321.94 | 8212.811374 | 3E+06 | 1258490.58 | 3 59262 | Final Load % Net | 17481844.6 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 82.8 |
| | | | | | | | | | | | | | | | | | |
| Scenario 5 - Moderate High | | | 2316.24 | 147.63 | 3 0 | 144.21 | 2.05 | | 90 | 54.48 | 5842.45 | 1.44 | 78.44 | E00.0 | 5 102.57 9853.97 | , | |
| Flow (existing conditions) | 405.01 | | | | | | | | 313.9324 | | | | | 2055.38488 | | 1 | |
| Flow (existing conditions) 290 and below | 485.21 | (| | | | 003.0242755 | 1.150681 | 0 | 313.9324 | 190.0337184 | 20379.26758 | 5.022917667 | 1 273.61 | U55.38488 | | | |
| Flow (existing conditions) 290 and below Volume = 34372 | 1692.479084 | . (| 8079.363067 | | | | | 200 | 100 | 400 | 400 | | | | | | |
| Flow (existing conditions) 290 and below Volume = 34372 Concentration | 1692.479084 260 | 260 | 8079.363067 0 260 | 260 | 260 | 260 | 260 | 260 | 130 | 130 | | 130 | 130 | 13 | 130 | | |
| Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor | 1692.479084 260 -0.9 | 260 -0.9 | 8079.363067 0 260 9 -0.9 | 260 | 260 | 260 -0.9 | 260 -0.9 | 260 | 130 | 130 | 0.2 | 130 | 130 | 130 | 130 | Total Log d | 11250140.2 |
| Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 1692.479084 260 -0.9 542808.1684 | 260 -0.9 | 0 8079.363067 0 260 9 -0.9 0 2591195.548 | 260 -0.9 165154.8194 | 260 9 -0.9 4 0 | 260 -0.9 161328.839 | 260 -0.9 2293.351 | 260 -0.9 | 130 0.2 105418.7 | 130 0.2 63813.44337 | 0.2 6843371.002 | 130 0.2 1686.698944 | 130 0.2 91878 | 130 2 0.3 690199.550 | 130 2 0.2 4 120142 | Total Load | 11259148.3 |
| Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load Wetland Function Value | 1692.479084 260 -0.9 542808.1684 -488527.3515 | -0.5 (| 0 8079.363067 0 260 9 -0.9 0 2591195.548 0 -2332075.993 | 260 -0.9 165154.8194 -148639.3374 | 0 260 9 -0.9 4 0 4 0 | 260 -0.9 161328.839 -145195.9551 | 260 -0.9 2293.351 -2064.02 | 0 260 0 -0.9 0 | 130 0.2 105418.7 21083.74 | 130 0.2 63813.44337 12762.68867 | 0.2 6843371.002 1368674.2 | 130 0.2 1686.698944 337.3397887 | 130 0.2 91878 18376 | 130 2 0 3 690199.550 5 138039.910 | 0 130 2 0.2 4 120142 1 24028 | | |
| Flow (existing conditions) 290 and below Volume = 34372 Concentration Wetland Function Factor Load | 1692.479084 260 -0.9 542808.1684 | 260 -0.9 | 0 8079.363067 0 260 9 -0.9 0 2591195.548 0 -2332075.993 | 260 -0.9 165154.8194 -148639.3374 | 0 260 9 -0.9 4 0 4 0 | 260 -0.9 161328.839 -145195.9551 | 260 -0.9 2293.351 -2064.02 | 0 260 0 -0.9 0 | 130 0.2 105418.7 | 130 0.2 63813.44337 12762.68867 | 0.2 6843371.002 | 130 0.2 1686.698944 337.3397887 | 130 0.2 91878 18376 | 130 2 0 3 690199.550 5 138039.910 | 0 130 2 0.2 4 120142 1 24028 | Total Load Final Load % Net | 11259148.3 1778361.39 |

Table C30. High Watershed Functions for Sediments - St. Johns Bayou.

| St. Johns Bayou - Low Ret | ention - Sedime | nts | | | | | | | | | | | | | | | |
|---|----------------------|----------------------|--------------|--------------|----------|---------------|----------|------------|-------------------|--------------------|-----------------------|------------------|--------|---------------|-------------------|--------------------------------|-------------|
| Contour Range | Cynraes/Tunalo 19 | Scrub/shrub marsh 19 | BI H 42 | Riparian 43 | River 45 | Onen water 24 | March 20 | Sandhar 24 | Cotton 26 | Cotton/soybeans 37 | Southeans 20 | Southeans/com 20 | Com 40 | Herb Veg 41 | Pactura I C Total | - | |
| Scenario 1 - Existing | Cypress/Tupelo To | SCIUD/SHIUD Marsh 19 | DLITI 42 | Ripanan 43 | River 45 | Open water 24 | Marsh 29 | Sandbar 31 | Collon 36 | Collon/soybeans 37 | Soybeans 36 | Soybeans/com 39 | Com 40 | nerb. veg. 41 | Pasture LC Total | | |
| Conditions (No Flood) | | | | | | | | | | | | | | | | | |
| 275 ft | 15.32 | 0 | 28.3 | 21.29 | 0 | 8.95 | 0 | 0 | 6.77 | 0 | 18.42 | | 0.04 | 6.8 | 3.38 109.28 | 3 | |
| Volume = 644 | 90.28257687 | 0 | | | | | | | 39.89641 | | 108.5512445 | | | 40.13213763 | | | |
| Concentration/Export Coefficient | 150 | 150 | | | | 150 | | | | 130 | | 130 | 130 | 130 | 130 | | |
| Wetland Function Factor | -0.1 | -0.1 | | -0.1 | | -0.1 | | | | 1 | | 1 | 1 | | 1 | | |
| Load | 16704.94006 | 0 | | | | | _ | | 7738.19 | | 21054.27712 | | | 7783.910269 | | Total Load | 121022.479 |
| Wetland Function Value | -1670.494006 | 0 | | | | | | | 7738.19 | | 21054.27712 | | | 7783.910269 | | | 100100 570 |
| Net Yield WATERSHED FUNCTION | 15034.44605 | 0 | 27772.50804 | 20893.16948 | 0 | 8783.178339 | 0 | 0 | 6999.988 | 0 | 19045.75887 | | 41.359 | 7041.347333 | 3 3494.8 | Final Load % Net Removal | 109106.579 |
| Scenario 2 - Authorized Project | | | | | | | | | | | | | | | | | |
| (2 seasons) | | | | | | | | | | | | | | | | | |
| 285 ft | 250.07 | 0 | | | | | | | | | | | | | | | |
| 280 ft Volume Season 1 = 7298 | 80.22 564.7967703 | 0 | | | | | | | 10.89 142.2212 | 5.500450004 | 153.73 3938.716102 | | 0.37 | 25.06 | | | |
| Volume Season 2 = 1692 | 258.3850298 | 0 | | | | | | | 35.0762 | | 495.1574499 | | | 80.71713845 | | | |
| Concentration/Export Coefficient Season 1 | 150 | 150 | | | | 150 | | | | 130 | | | | | | | |
| Concentration/Export Coefficient | 130 | 130 | . 150 | 150 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | _ | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 0 | 0 | 0 |) (|) (| | 0 | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Load Season 1 * | 104504.064 | 0 | | | | | | | 27971.57 | 1088.301623 | 774653.0956 | 4.442047443 | 541.93 | 86184.60448 | 3 23423 | | |
| Load Season 2 ** | 82868.67831 | 0 | | | | | | | 11249.56 | | 158805.808 | | | 25887.42307 | | Total Load | 1947118.37 |
| Wetland Function Value (Both | - | | | | | | 1 | | | | | | | | | | - |
| Seasons) * Export Coefficients were reduced by 50% for upland and | -18737.27423 | 0 | -48656.83729 | -6519.378763 | 0 | -7901.133996 | 0 | 0 | 39221.14 | 1088.301623 | 933458.9035 | 4.442047443 | 924.15 | 112072.0275 | 5 42203 | | |
| ag land covers ** No Export for upland and ag land covers | | | | | | | | | | | | | | | | | |
| Net Yield | 168635.4681 | 0 | 437911.5356 | 58674.40887 | 0 | 71110.20597 | 0 | 0 | 35464.67 | 985.9163086 | 844700.4556 | 4.024148198 | 834.94 | 101375.204 | 38122 | Final Load | 1757818.39 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.72 |
| Scenario 3 - Avoid and | | | | | | | | | | | | | | | | | |
| Minimize (2 seasons) | | | | | | | | | | | | | | | | | |
| 282 ft | 101.09 | 0 | | | | 44.74 | | | | 0 | | | 0.46 | | | | |
| 280 ft | 80.22 | 0 | | | | | | | | 0 | | | 0.37 | | | | |
| Volume Season 1 = 3080 | 377.2380537 | 0 | | 176.3976931 | | | | | 61.87167 | | 1092.381991 | | | 153.746244 | | | |
| Volume Season 2 = 1692 | 258.3850298 | 0 | 553.1024348 | 110.3177172 | 0 | 99.49530753 | 0 | 0 | 35.0762 | 0 | 495.1574499 | (| 1.1918 | 80.71713845 | 58.557 | | |
| Concentration/Export Coefficient Season 1 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | | |
| Concentration/Export Coefficient | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | | |
| Season 2 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | 260 | | | | | | | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | -0.1 | | | 1 | 1 | 1 | 1 | 1 | | 1 1 | | |
| Load Season 1 * | 69800.16846 | 0.1 | | | | 30891.87394 | | | 11884.23 | 0 | 209823.3026 | | 329.72 | 29531.3772 | | | |
| Load Season 2 ** | 82868.67831 | 0 | | | | | | | 11249.56 | | 158805.808 | | | 25887.4230 | | Total Load | 1122380.74 |
| Wetland Function Value (Both | | | | | | | <u> </u> | | | | | | | | 10.00 | | |
| Seasons) | -15266.88468 | 0 | -35578.79514 | -6801.963251 | 0 | -6280.179008 | 0 | 0 | 23133.79 | 0 | 368629.1106 | i c | 711.94 | 55418.80033 | 35209 | | |
| Net Yield | 137401.9621 | 0 | 320209.1563 | 61217.66926 | 0 | 56521.61108 | 0 | 0 | 20864.03 | 0 | 332536.2404 | (| 641.95 | 49985.29896 | 31748 | Final Load % Net | 1011126.203 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | Removal | 9.9 |
| Scenario 4 - Extreme High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 300 and below | 686.78 | 0 | | | | 274.41 | | | | 765.66 | | | 7497.1 | | 176.21 54998.3 | 3 | |
| Volume = 310381 | 3875.819129 | 0 | | | | | | | 2349.318 | | 202275.1165 | | | 21117.84732 | | - | |
| Concentration Wetland Function Factor | 260 -0.1 | 260 | | | | 260 -0.1 | | | | 130 | | | | | 130 | | |
| Load Load | 1243044.184 | -0.1 0 | | | | | | | 775369.6 | | 66758932.76 | | | | | Total Load | 102094379. |
| Wetland Function Value | -124304.4184 | 0 | | | | | | | 775369.6 | | 66758932.76 | | | 6969739.89 | | . Jean Lodu | 102004373. |
| Net Yield | 1118739.766 | 0 | | | | | | | 700022.8 | | 60271609.72 | | | 6292452.94 | | Final Load | 92139915.2 |
| WATERSHED FUNCTION | | | | | | | | | | | | | | | | % Net Removal | 9.7 |
| Scenario 5 - Moderate High Flow (existing conditions) | | | | | | | | | | | | | | | | | |
| 290 and below | 485.21 | 0 | | | | 144.21 | | | 90 | 54.48 | | | | | 102.57 9853.97 | 1 | |
| Volume = 34372 | 1692.479084 | C | | | | | | | 313.9324 | 190.0337184 | 20379.26758 | | | 2055.384885 | | | |
| Concentration | 260 | 260 | | | | 260 | | 260 | 130 | 130 | | | | 130 | | | |
| Wetland Function Factor | -0.1 | -0.1 | | | | | | -0.1 | | 1 | | 1 | | · | 1 | | |
| Load | 542808.1684 | 0 | | | | | | | 105418.7 | | 6843371.002 | | | 690199.5504 | | Total Load | 11259148.3 |
| | -54280.81684 | 0 | | | | | | | 105418.7 | | 6843371.002 | 1686.698944 | 91878 | 690199.5504 | 120142 | | 10276919.2 |
| Wetland Function Value Net Yield | 488527.3515 | 0 | 2332075.993 | 148639.3374 | | 145195.9551 | | | 95350.31 | | 6189771.616 | | | 624279.6985 | | Final Load | |

Table C31. Low Watershed Functions for Sediments - St. Johns Bayou.

APPENDIX D

Literature Review of Herbicide Application

Literature Review of Herbicide Application

Herbicide transport in surface and subsurface drainage was extensively studied during the Management Systems Evaluations Areas (MSEA) programs evaluation of farming-systems impacts on water quality in Walnut Creek Watershed, Iowa. The MSEA program was formed as a joint partnership between USDA-ARS, USDA-CSREES, USDA-ES, State Agricultural Experiment Stations, Cooperative Extension Service, U.S. Geological Survey, and USEPA (Hatfield, J.L. et al. 1999). The objective of the study was to gain a better understanding of the impacts of farming practices on water quality in the Midwest. The Walnut Creek watershed near Ames, Iowa was selected as a representative site.

The Walnut Creek watershed has been extensively monitored as part of the EPA Midwest Agricultural Surface/Subsurface Transport and Effects Research (MASTER) program. Corn and soybeans are the primary production crops within the Walnut Creek watershed. Approximately 88 percent of the watershed are represented by one of these two land uses (Donigian et al. 1993). Farming practices within the watershed utilize a corn-soybean rotation scheme. The other 12 percent of the watershed contain scattered pastures; wetland forests along stream channels, residential areas, and road networks. The total amount of acreage in corn was approximately 2,500 ha.

A detailed groundwater model was applied to the site to gain an understanding of the potential for herbicide transport from land application to water resources at the site (Lin et al., 1995). Typical use of the herbicide atrazine in the watershed corresponded to a pre-emergence application to acreage planted with corn. This type of application of the herbicide was incorporated into the simulation conducted by Lin et al. (1995). The model selected for the study was FEMWATER, a three-dimensional finite element model of density-dependent flow and transport through saturated-unsaturated porous media. The FEMWATER model allows for the evaluation of the impact of the application of agrichemicals on groundwater quality. The simulation described by Lin selected atrazine as the agrichemical to be simulated in the transport simulation.

In the Walnut Creek watershed, atrazine is typically applied with metachlor to control both annual and broadleaf weeds in acreage planted with corn. A pre-emergence banded application is sprayed directly onto the crop row. Crop rows range in size from approximately 25 to 30 cm depending on the planter being used. Atrazine is the common name for 2-chloro-4(ethylamino)-6(isopropylamino)-s-triazine and is a triazine herbicide. Herbicides in this family are not subject to excessive leaching from soils and are reversibly adsorbed to clay and organic colloids (Klingman and Ashton 1982). The selected simulation period was for the 1992-growing season. Donigian, Chinnaswamy, and Beyerlein (1993) calculated the amount of atrazine applied during the growing season to be 0.4 kg ha-1 of active ingredient. This value reflects 578 kg of active ingredient being applied to 1,413 ha of treated corn. To allow for the evaluation of the maximum possible amount of corn acreage being treated with atrazine for the 1992-growing season the entire 2,500 ha of corn were treated at the 0.4 kg ha⁻¹ rate.

Results from the simulation revealed that the herbicide leached to a depth of approximately 1.2 m during the simulation period from 6 April to 26 September. During the time span the herbicide was only found in the surface soil. No atrazine was found in any of the soil layers at the end of the simulation period. A sensitivity analyses was

conducted to determine the impacts of altering the land use, saturated hydraulic conductivity, distribution coefficient, decay constant, and loading rate parameters on the simulation output from the FEMWATER model. The analysis revealed that predicted concentrations of atrazine generated from the model upon altering the parameters were reasonable and represented the physical processes occurring within the watershed.

The simulation results coincide well with data collected by Moorman et al. (1999). Atrazine concentrations in the soil following the 1994-growing season (183 days after treatment) showed that the concentration decreased dramatically with depth. Concentrations ranged from 49 ug/kg at the 0-7.5 cm depth to less than 5 ug/kg from the 15-30 cm range. This value decreased to zero ug/kg at approximately the 30 cm range. In Morrman's study it was stated that the atrazine concentrations in subsurface drainage and groundwater were generally well below the Maximum Contaminant Limit (MCL) for drinking water. Only 1.4% of the groundwater samples beneath the subsurface drains (wells at the 2.6 m depth) contained > 3 ug L⁻¹ atrazine.

The other potentially pathway for atrazine loss is to surface water resources via overland flow. Jaynes et al. (1999) examined the potential effect of atrazine contamination to surface waters following atrazine application to corn as part of the MASTER program for a six-year period. During that period it was concluded that herbicide losses via stream discharge were a small fraction of the herbicide applied each year. Typically this value was found to be approximately < 0.006 kg kg⁻¹. It was noted that atrazine concentrations did occasionally exceed the MCL for drinking water. However, it was noted that the high concentration flows were ephemeral and monthly flow-averaged concentrations exceeded the MCL in only 1 month in four years.

Literature reports demonstrate that the potential contamination to water resources from atrazine application to corn and corn/soybean rotation is rather limited. The primary concern appears to be the relationship between application time and precipitation frequency. The worse scenarios for surface water contamination are high flow events immediately following application. Groundwater concentrations appear to be the highest during low runoff precipitation events in which high atrazine rates are applied year after year at the same location. It is a feasible assumption that through adoption of Best Management Practices (BMPs), in combination with monitoring efforts, that atrazine contamination to water resources can be maintained below the MCL.

References:

Hatfield, J.L., Jaynes, M.R., Burkart, C.A., Cambardella, T.B., Morrman, J.H., Prueger, and Smith, M.A. 1999. Special submissions—farming systems impacts on water quality in Walnut Creek Watershed, Iowa, J. Environ. Qual. 28:11-24.

Donigian, A.S., Chinnaswamy, R.V., and Beyerlein, D.C. 1993. Surface water exposure assessment for Walnut Creek, Iowa, preliminary application of the EPA hydrological simulation program – FORTRAN (HSPF) to assess agrichemical contributions and impacts, Final Review Draft, U.S. Environmental Protection Agency, Athens, GA.

Lin, H.J., Deliman, P.N., and Martin, W.D. 1995. FEMWATER usability for the EPA MASTER and wellhead protection research programs, Technical Report HL-95-5, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

Klingman, G.C. and Ashton, F.M. 1982. Weed science principles and practices, John Wiley & Sons, NY, 237-249.

Moorman, T.B., Jaynes, D.B., Cambardella, J.L., Hatfield, R.L., Pfeiffer, R.L., and Morrow, A.J. 1999. Water quality in Walnut Creek Watershed: herbicides in soils, subsurface drainage, and groundwater, J. Environ. Qual. 28:35-45.

Jaynes, D.B., Hatfield, J.L., and Meek, D.W. Water quality in Walnut Creek Watershed: herbicides and nitrate in surface waters, J. Environ. Qual. 28:45-59.

Form Approved REPORT DOCUMENTATION PAGE OMB No. 0704-0188 Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS. 1. REPORT DATE (DD-MM-YYYY) 2. REPORT TYPE 3. DATES COVERED (From - To) April 2000 Final Report 4. TITLE AND SUBTITLE 5a. CONTRACT NUMBER Supplemental Water Quality Analysis—St. Johns Bayou and New Madrid Floodway **5b. GRANT NUMBER** 5c. PROGRAM ELEMENT NUMBER 6. AUTHOR(S) 5d. PROJECT NUMBER Steven L. Ashby, Carlos E. Ruiz, Patrick N. Deliman 5e. TASK NUMBER 5f. WORK UNIT NUMBER 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 8. PERFORMING ORGANIZATION REPORT NUMBER U.S. Army Engineer Research and Development Center **Environmental Laboratory** ERDC/EL SR-00-7 3909 Halls Ferry Road Vicksburg, MS 39180-6199 9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) 10. SPONSOR/MONITOR'S ACRONYM(S) U.S. Army Engineer District, Memphis Memphis, TN 38103-1894 11. SPONSOR/MONITOR'S REPORT NUMBER(S) 12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited. 13. SUPPLEMENTARY NOTES 14. ABSTRACT A supplemental assessment of water quality data was conducted to describe potential impacts on water quality in the St. Johns Bayou and New Madrid Floodway as a result of the proposed flood control project. Existing water quality data from Federal and state resource agencies and literature-based information on land use effects on water quality were compiled for evaluation. Results of this evaluation were used to describe water quality conditions and, in conjunction with land cover and hydrology information, the relative transport/retention of selected materials associated with various hydrologic events based on selected surface water elevations. Specific issues addressed included evaluation of 1) the effects of hydrologic changes on water quality for both the area impacted by the proposed project and in relationship to the overall water quality of the Mississippi River, 2) the effects on water quality associated with potential changes in pesticide use, and 3) the effects of proposed groundwater supplement on Big Oak Tree State Park. Water quality in the area reflects conditions typical for basins where agriculture is the dominant land use. In general, nutrient concentrations (with the exception of phosphorus) were not excessively high except during periods of elevated flow, and basin concentrations were not substantially different than observations for the Mississippi River. Sediment concentrations were generally lower than concentrations in the Mississippi River and increase with runoff as expected. With the exception of a few occasional high concentrations of nitrates,

Big Oak Tree State Park Water quality Nutrients New Madrid Floodway St. Johns Bayou Wetlands 16. SECURITY CLASSIFICATION OF: 18. NUMBER 19a. NAME OF RESPONSIBLE PERSON 17. LIMITATION OF ABSTRACT **OF PAGES** a. REPORT b. ABSTRACT c. THIS PAGE 19b. TELEPHONE NUMBER (include area code) 186 **UNCLASSIFIED** UNCLASSIFIED

15. SUBJECT TERMS

(Continued)

14. (Concluded).

groundwater quality is acceptable although phosphorus concentrations in groundwater were generally higher than in surface waters. Point sources were the most notable sources of extremes (high nutrients or low dissolved oxygen concentrations).

Potential changes in pesticide usage and impacts on water quality were evaluated with an assessment of potential changes in cropping practices, a literature review of herbicide transport research, and an assessment of pesticide data compiled in the data retrievals. In general, pesticide concentrations were relatively low in surface and subsurface waters, and water supply concentrations were below water quality criteria for drinking water. The impact of pesticides, atrazine in particular, on public groundwater resources is expected to be minimal.

Water quality with the project alternative should be similar to conditions that exist during periods of no flooding. Material processing should be similar between these two scenarios as well. The basin most likely retains or removes material from headwaters and floodwaters, and this process is maximized during low-water periods and is comparable with the alternative project.

Impacts to the water quality of the Mississippi River with the proposed or alternative project in place are not expected to be discernible, due to the overwhelming volume of water in the Mississippi River relative to floodwater volume in the project area. Mass balance estimates indicated that impacts to material loads of the Mississippi River are less than 0.1% for moderate flows with the project.

Potential impacts to Big Oak Tree State Park with the project are likely to be associated with a decreased supply of sediments and the associated sustainability of the site. Historical alteration in the flow regime associated with the development of agriculture in the area during the 20th century has been suggested as a major mechanism contributing to the decline at the park. The use of groundwater to restore a flooding regime more conducive to the sustainability of the park is suggested, and the impacts of reduction in material supply (e.g. sediments) can be lessened with the use of surface water when available.